

Penicillium vulpinum: synnemata



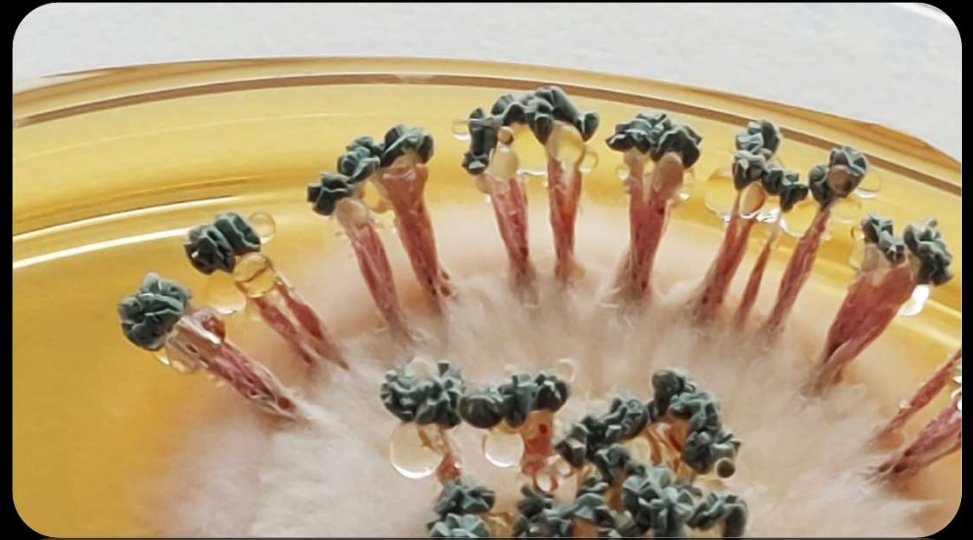
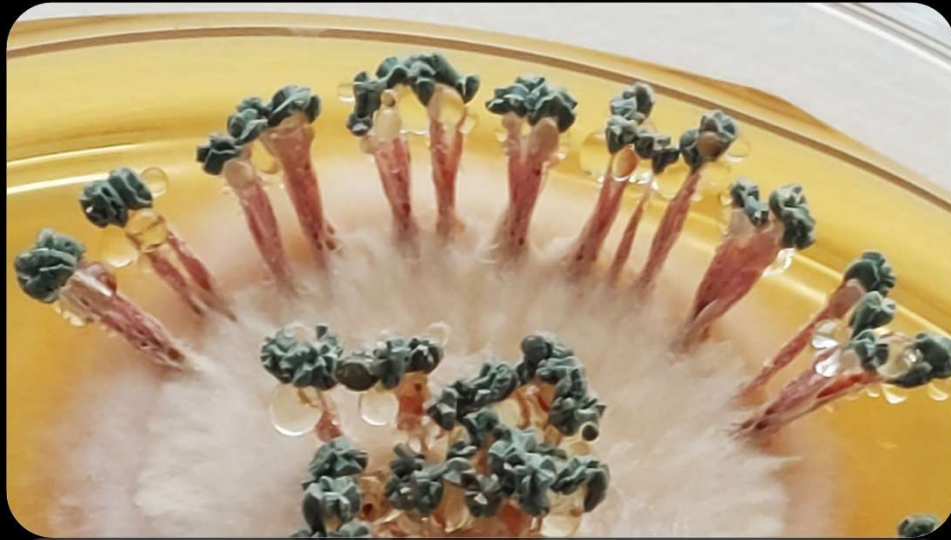
Dr. habil. Anna Salek
23.01. - 26.02.2024



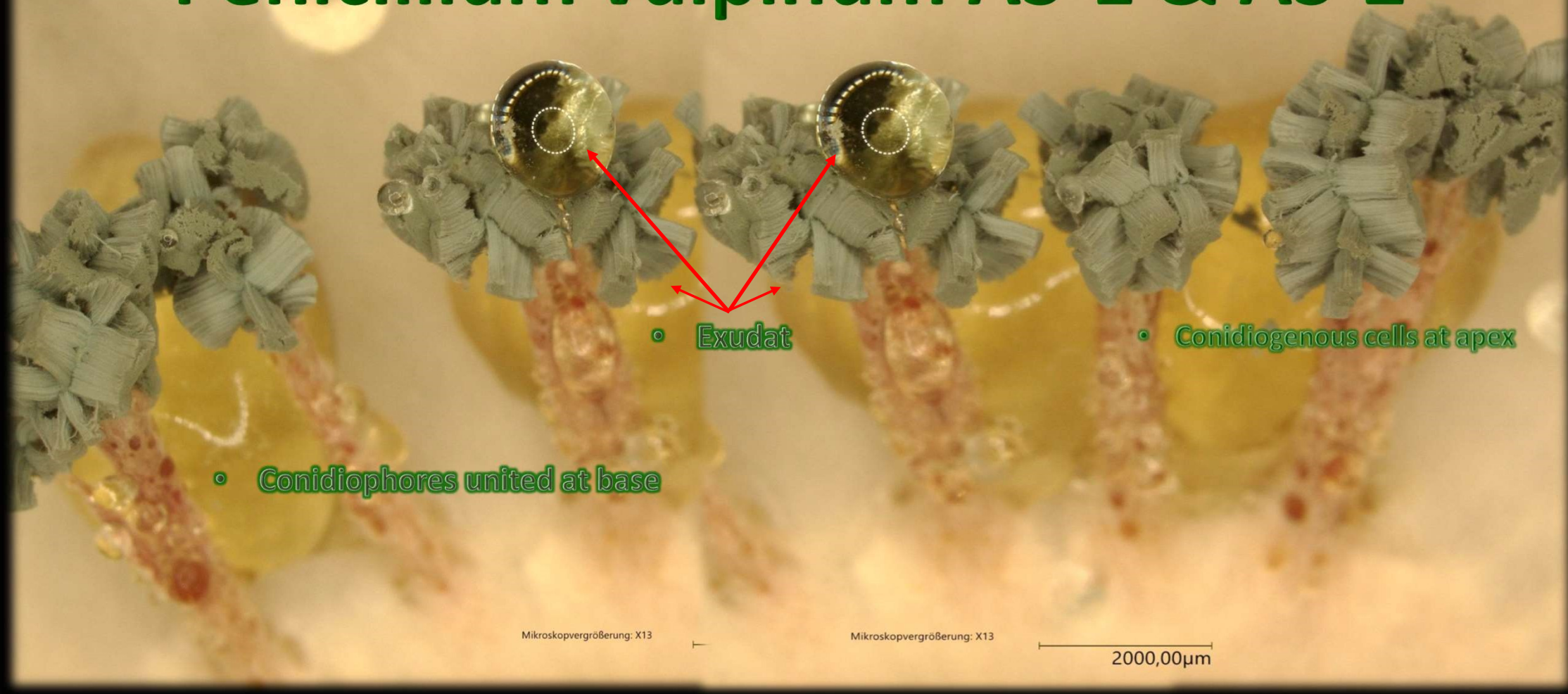
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Synnemata: Penicillium vulpinum AS-1 & AS-2



Penicillium vulpinum: Synnemata





Penicillium vulpinum: synnemata

Viele Arten, die für die Umweltmykologie von Bedeutung sind, sind "anamorphe Pilze".

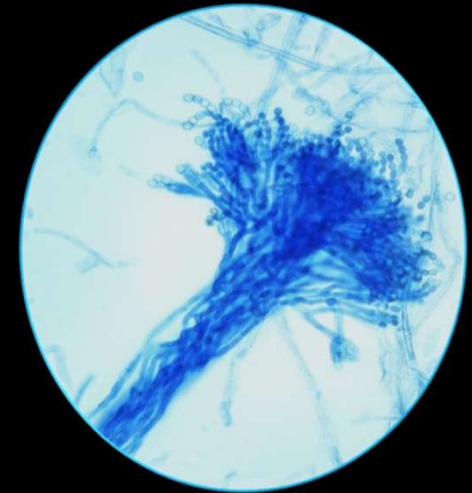
Dies ist die heutige Terminologie für die Pilze, die früher als Fungi imperfecti, wie *Deuteromyces*, *Hyphomycetes*, *Coelomycetes* usw. bezeichnet wurden.

Diese Bezeichnungen wurden für Pilze der *Ascomycetes* oder *Basidiomycetes* verwendet, die nicht geschlechtsreif sind, aber phylogenetische Studien haben gezeigt, dass innerhalb vieler Gattungen geschlechtliche und ungeschlechtliche Arten eng miteinander verwandt sind.

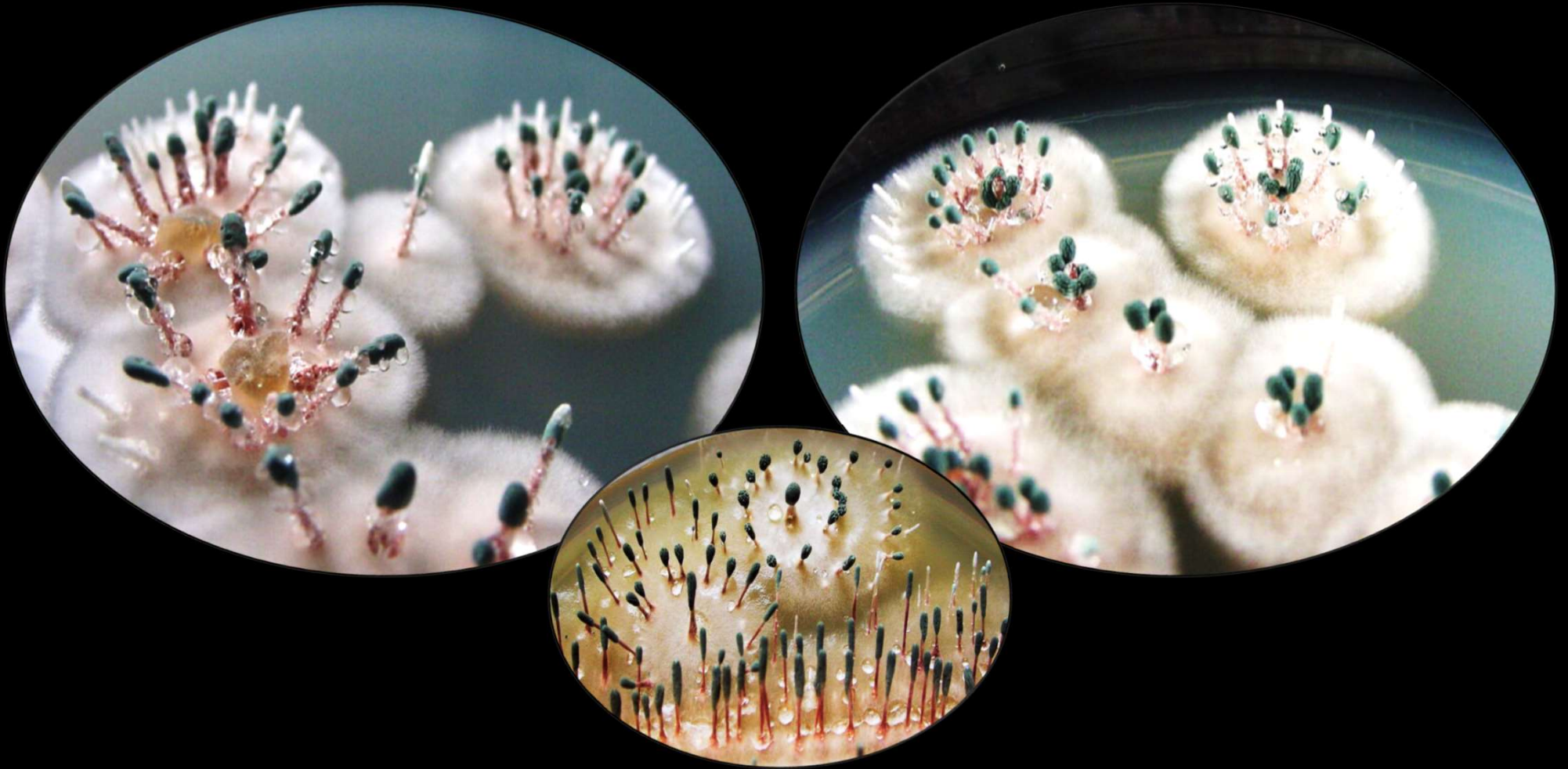
Penicillium vulpinum: synnemata

Ein Synnema (Plural Synnemata, auch Coremia; Ableitung: "Fäden zusammen") ist ein großes, aufrechtes Fortpflanzungsgebilde, das von einigen Pilzen getragen wird und kompakte Konidiophoren trägt, die zu einem Strang verschmelzen, der einem Weizenhalm ähnelt, mit Konidien am Ende oder an den Rändern.

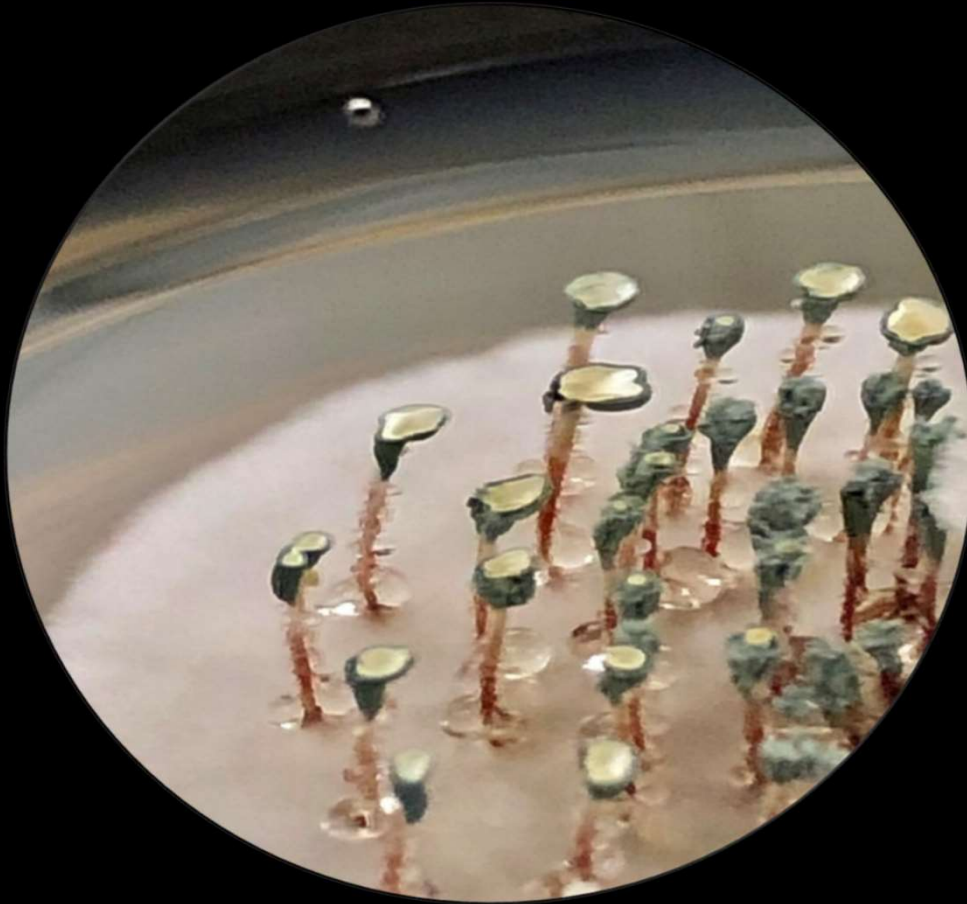
Pilzgattungen, die Synnemata tragen, schließen *Doratomyces* ein.



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Penicillium vulpinum bildet ein gut entwickeltes, septiertes und stark verzweigtes hyalines Myzel, aus dem Konidiophoren hervorgehen.

Die Myzelzellen enthalten einzelne Kerne und Septen mit einer zentralen Pore, durch die der Zellinhalt frei von einer Zelle zur anderen wandert. Diese tragen

Phialiden, an deren Enden sich Sporen
in langen Ketten bilden.



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Die Konidiophoren aggregieren gelegentlich und verschmelzen

zu unterschiedlich langen Strukturen, die Synnemata genannt werden.

Konidiophore können auf dem Myzel *Penicillium vulpinum* verstreut sein

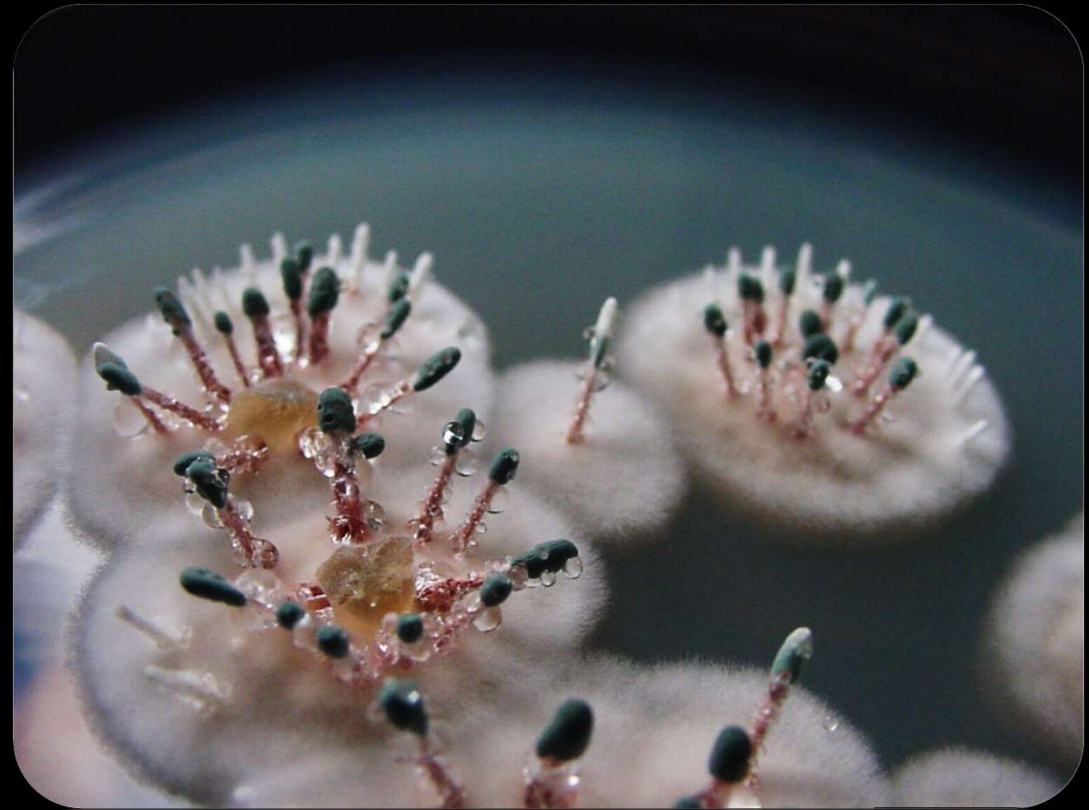
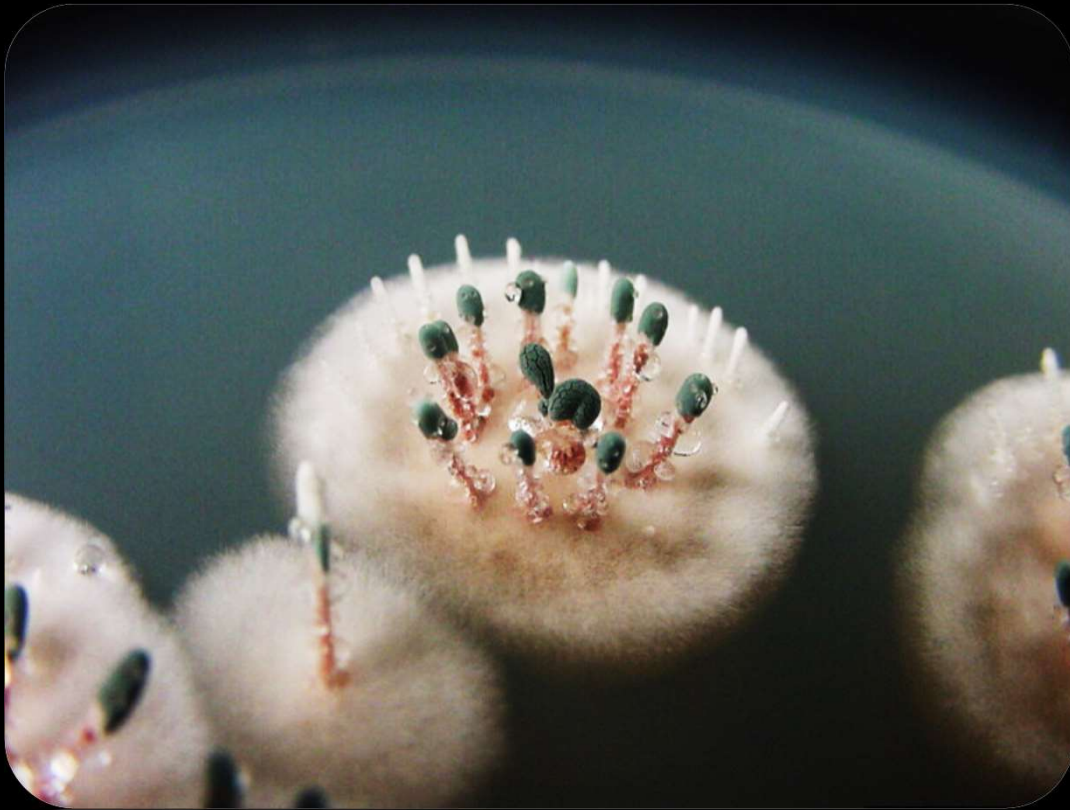
oder in speziellen Strukturen, den Fruchtkörpern, die Synnemata,

Pyknidien, Acervuli und Sporodochien gebildet werden.

Penicillium vulpinum: synnemata



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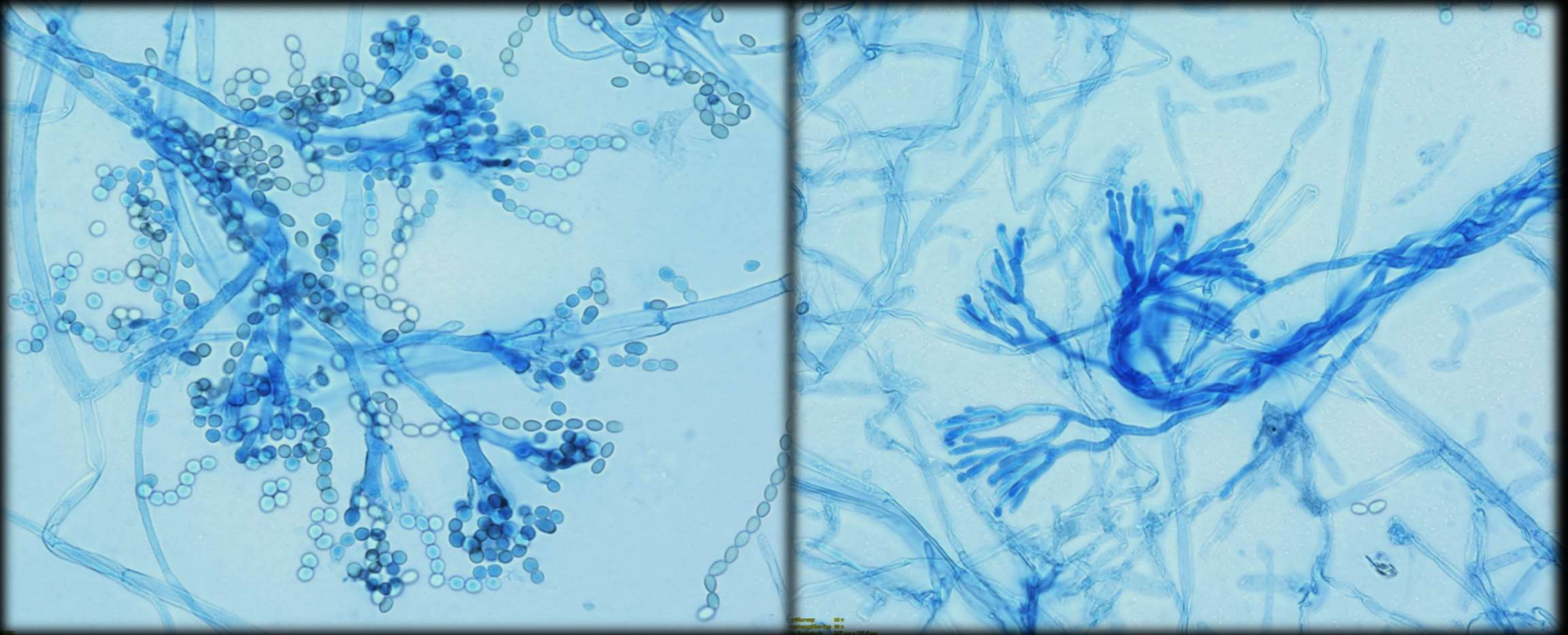


Penicillium vulpinum: synnemata



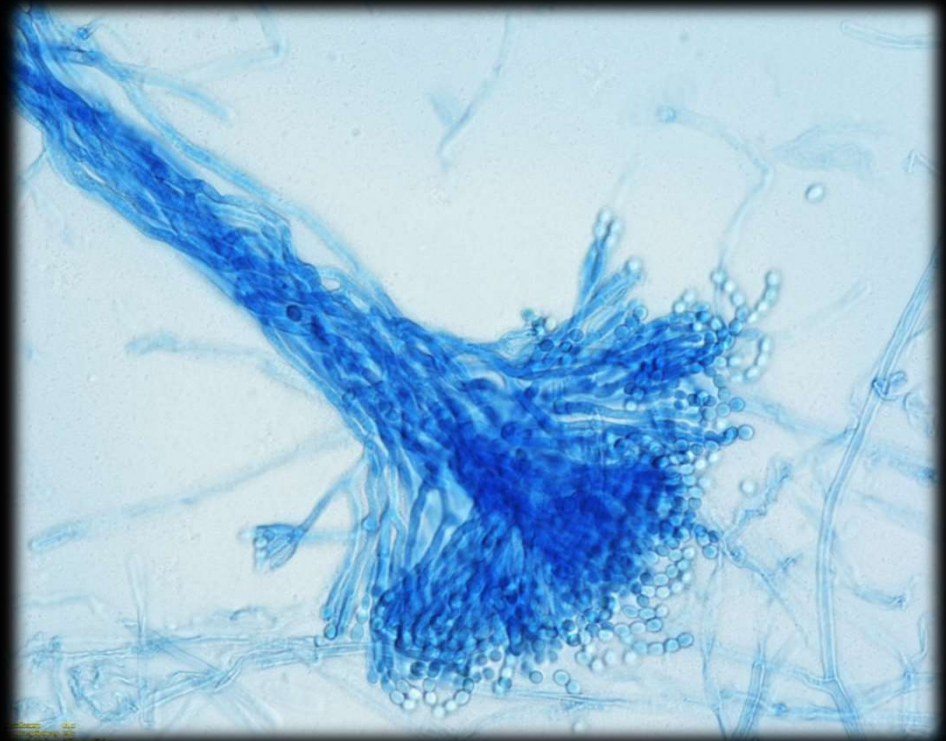
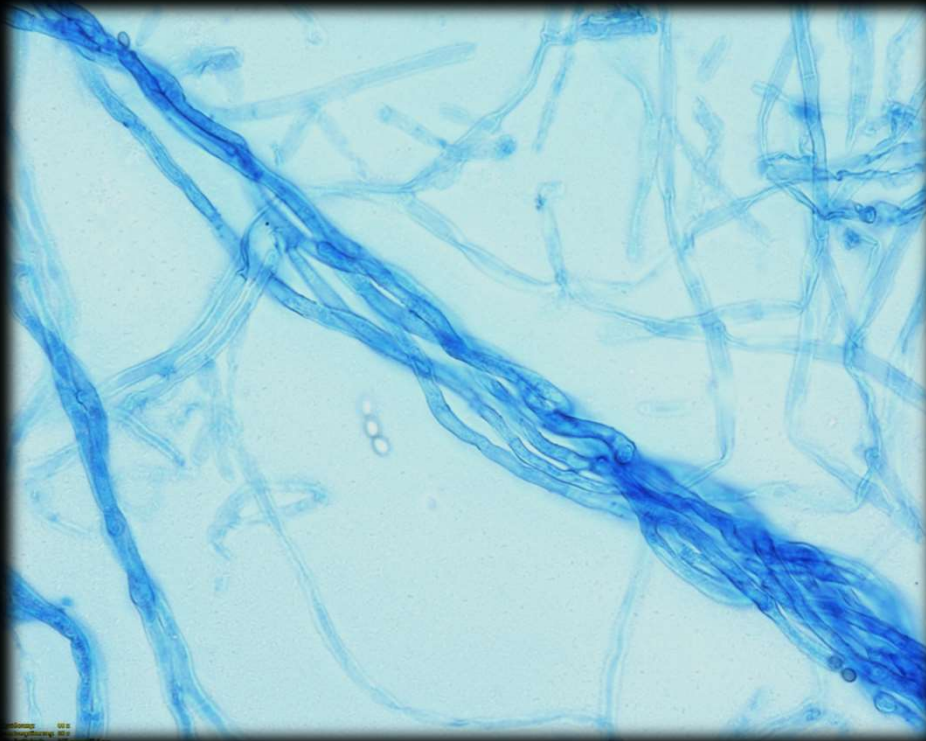
Penicillium vulpinum: synnemata

Präparaten, 500 und 750x

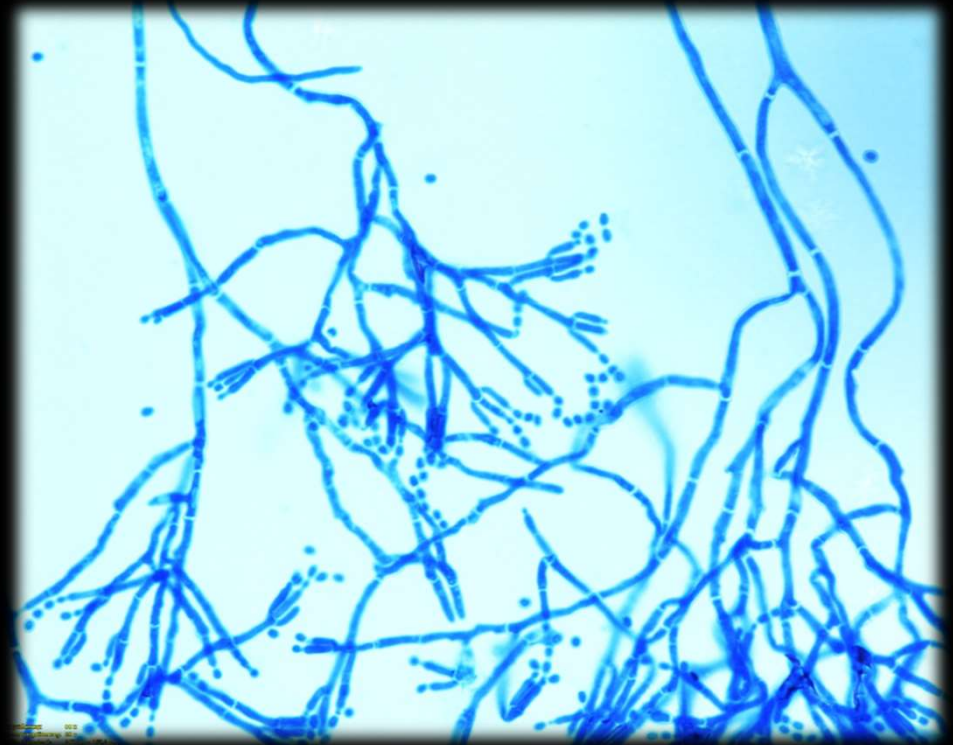
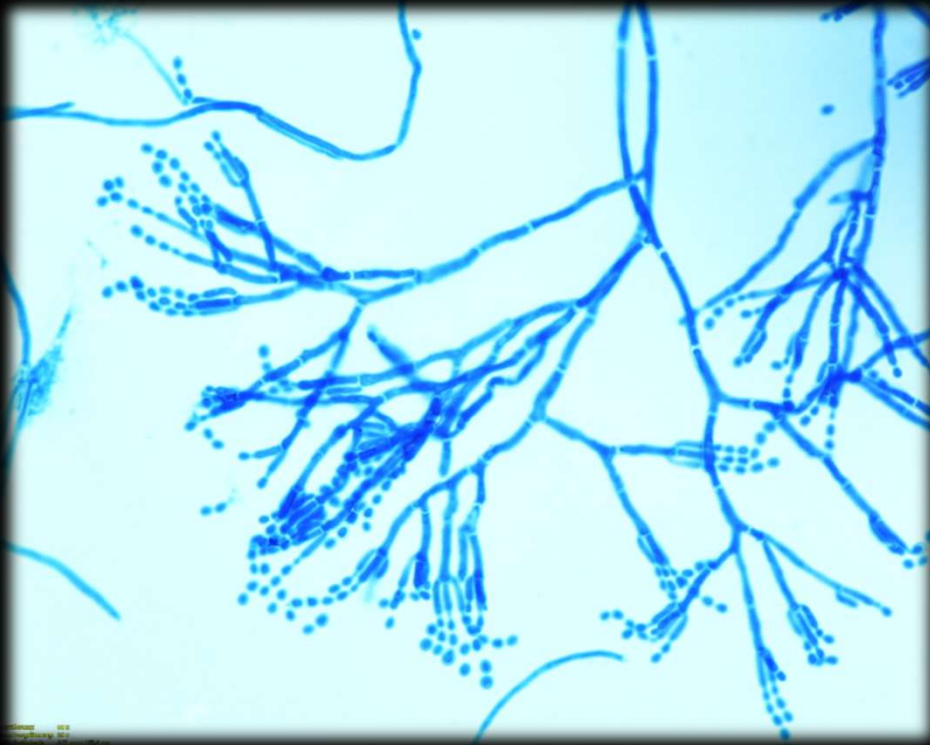


Penicillium vulpinum: synnemata

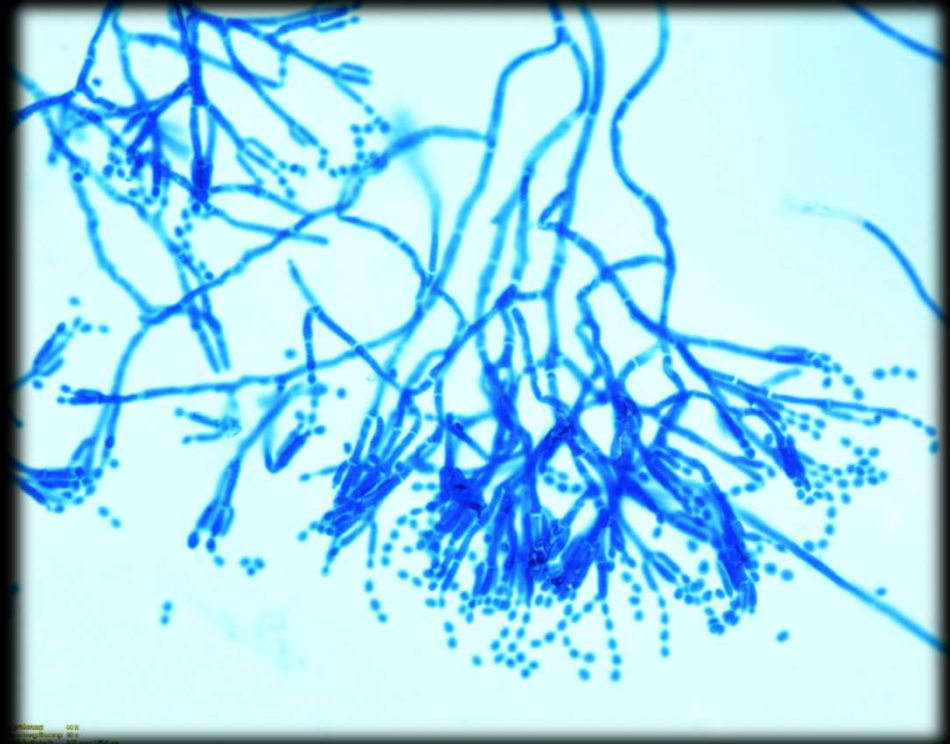
Präparaten, 500 und 750x



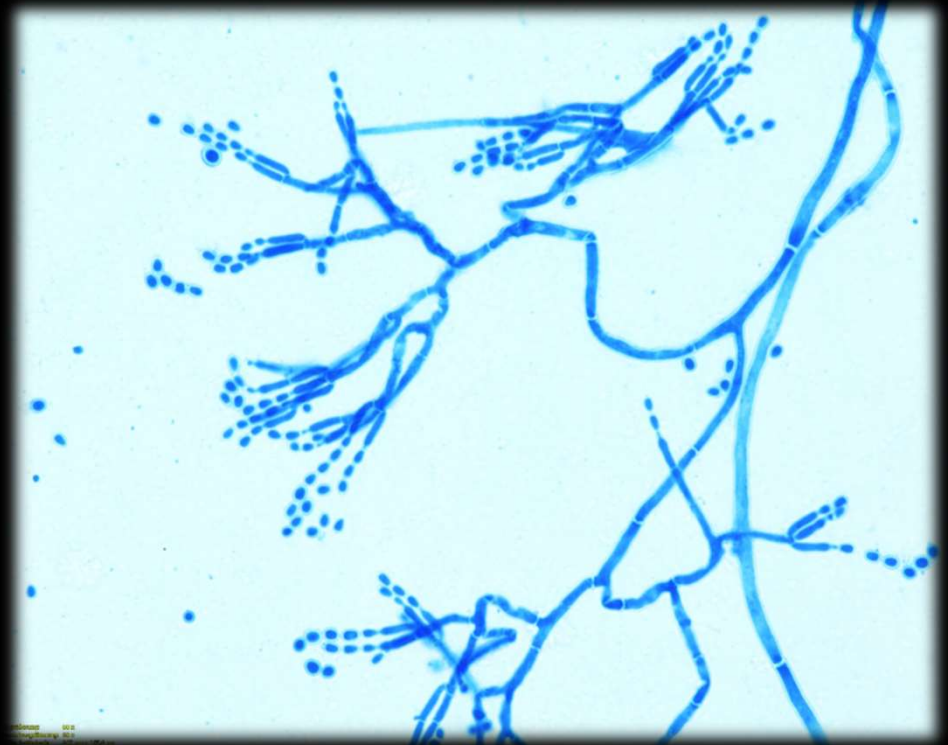
Penicillium vulpinum: synnemata Präparaten, 750x



Penicillium vulpinum: synnemata Präparaten, 750x

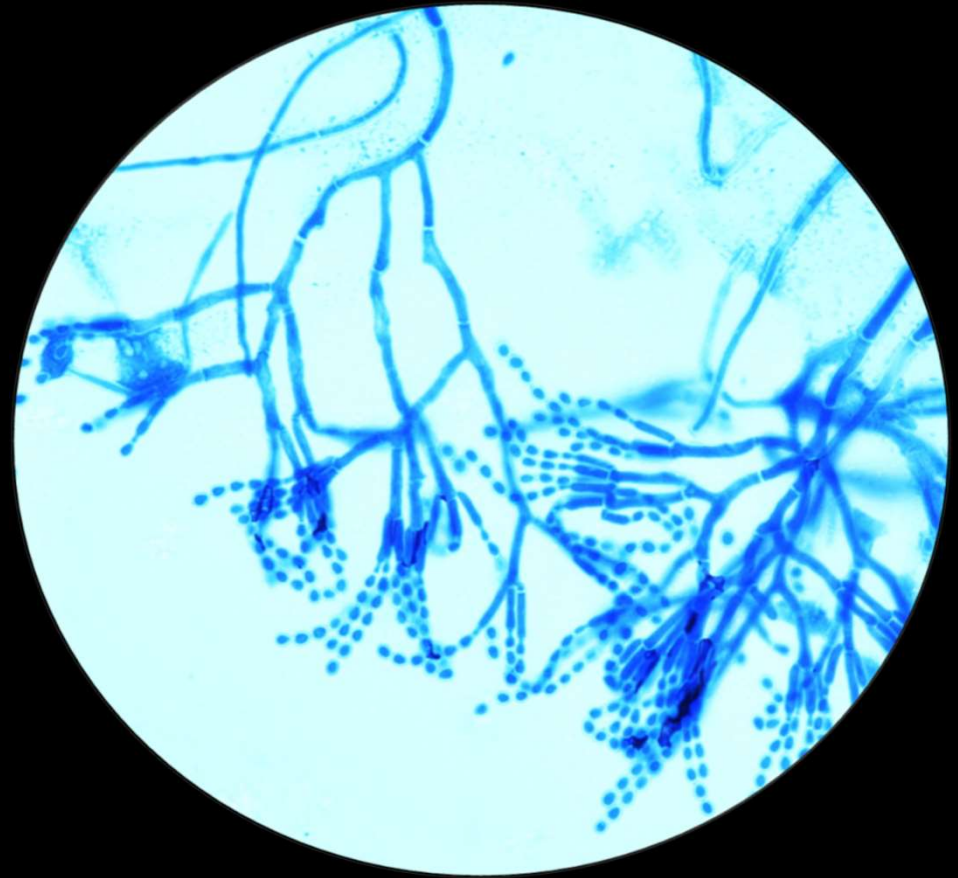
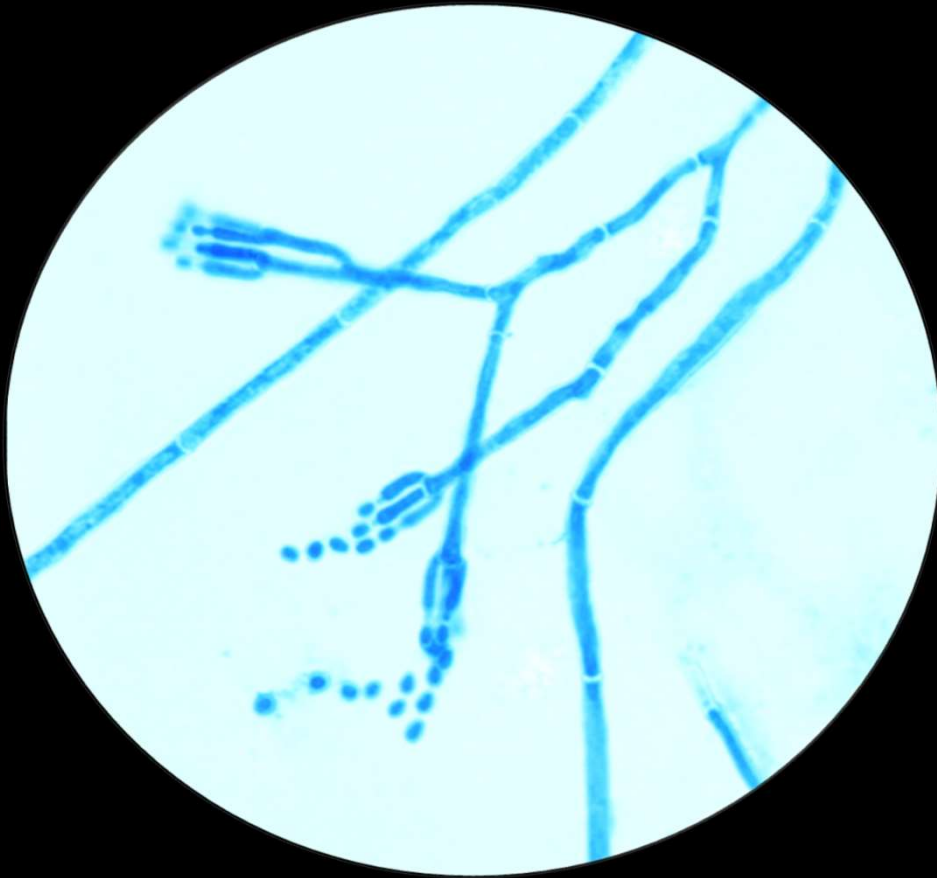


Penicillium vulpinum: synnemata Präparaten, 750x



Penicillium vulpinum: synnemata

Präparaten, 750x



Penicillium vulpinum: synnemata



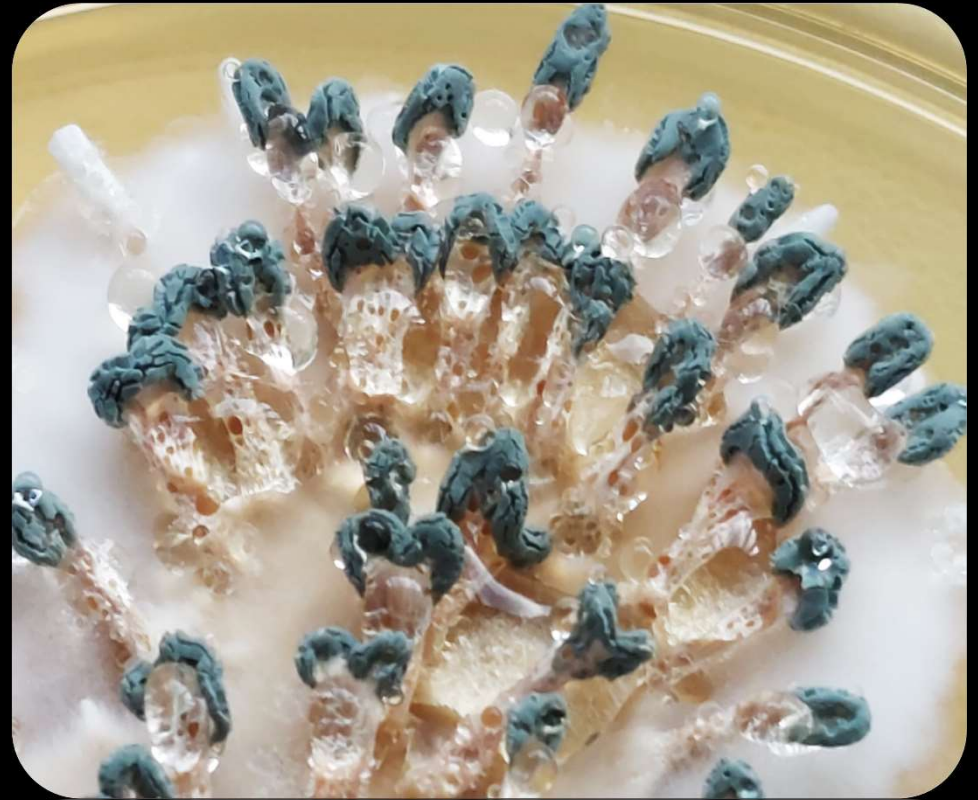
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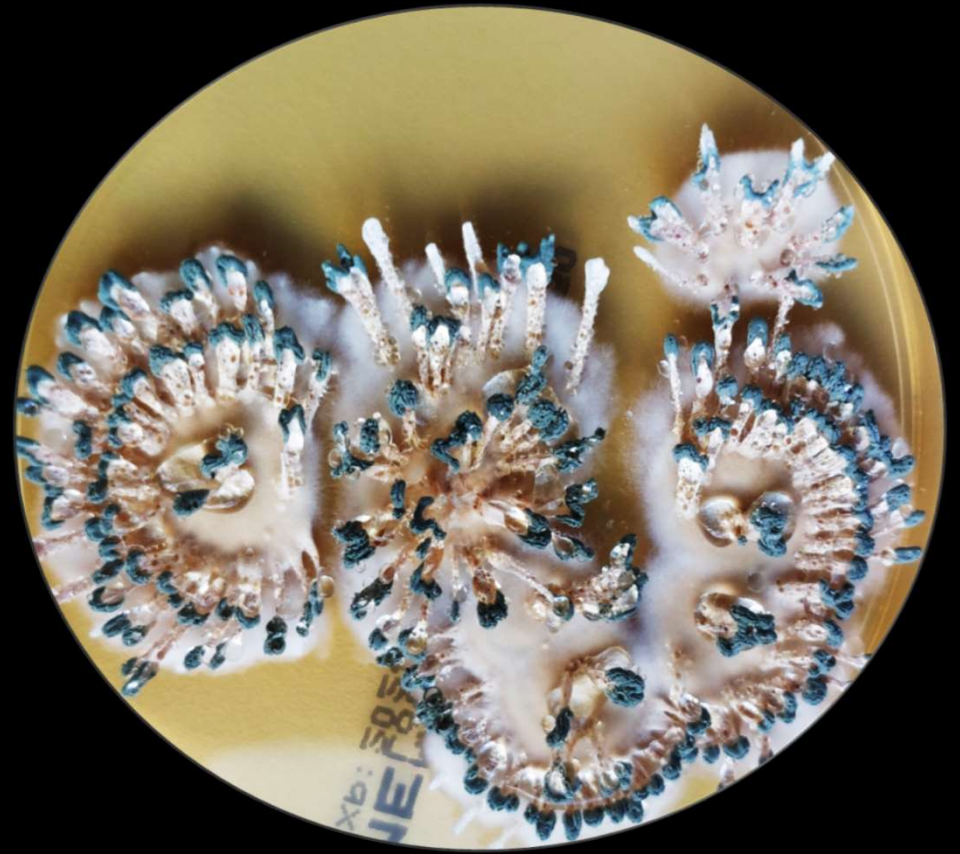
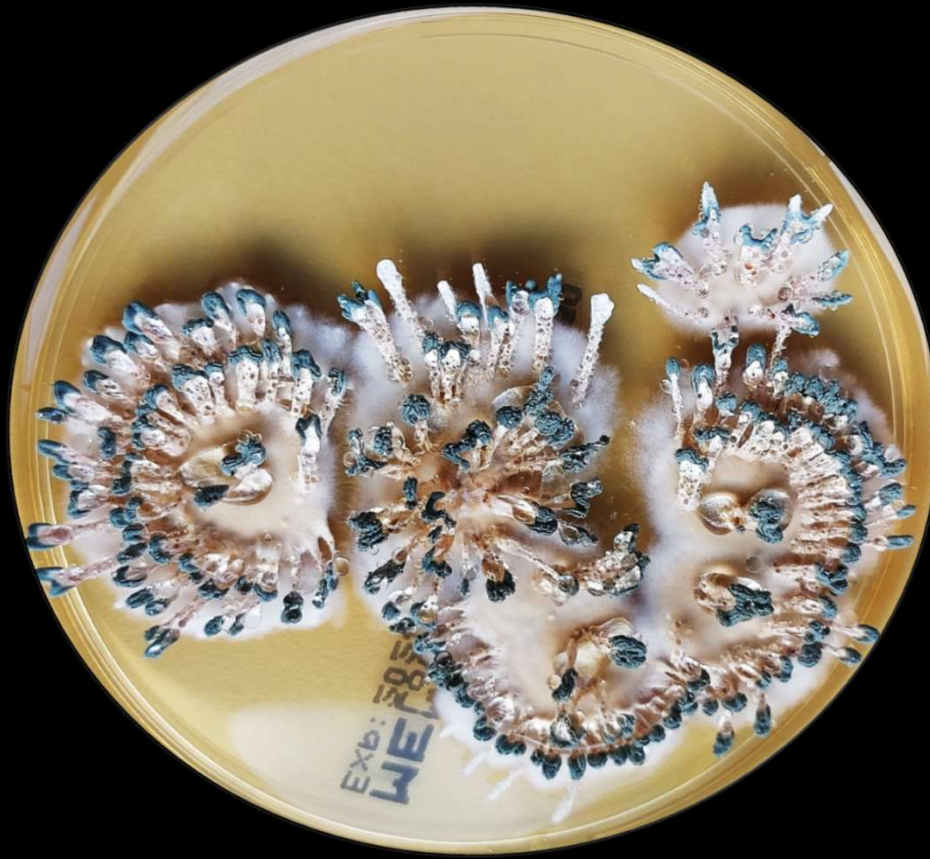
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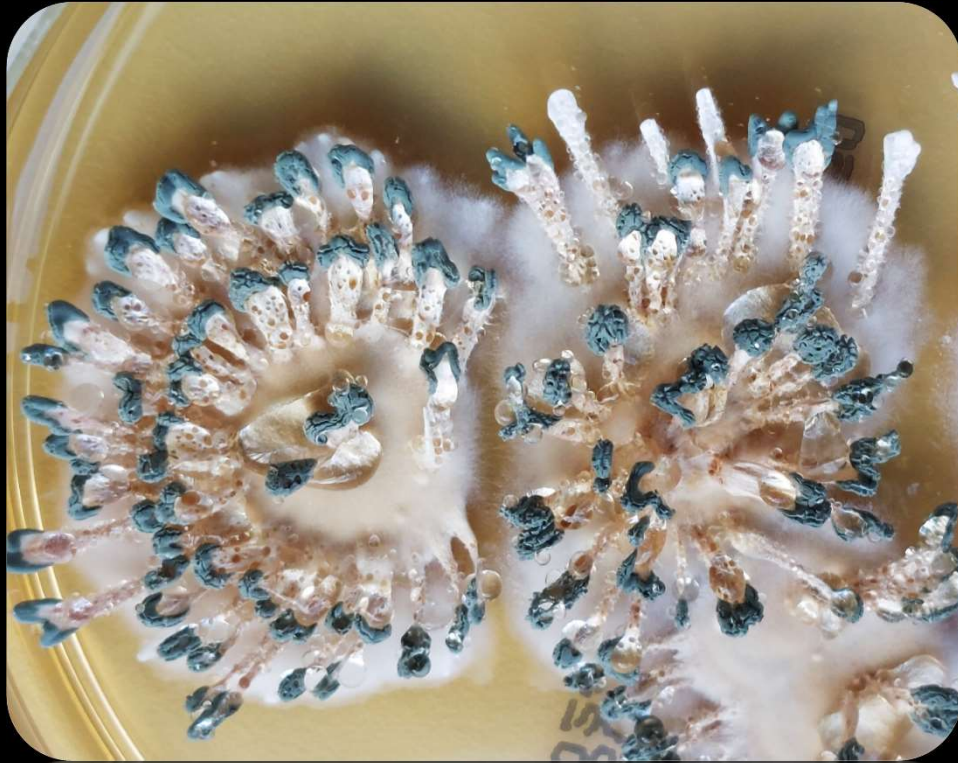
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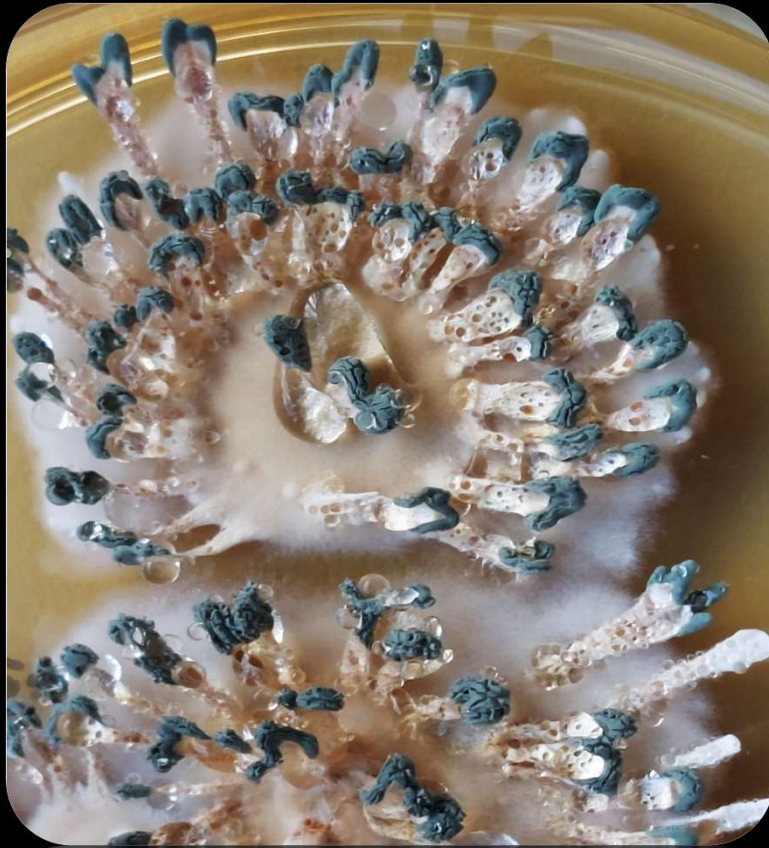
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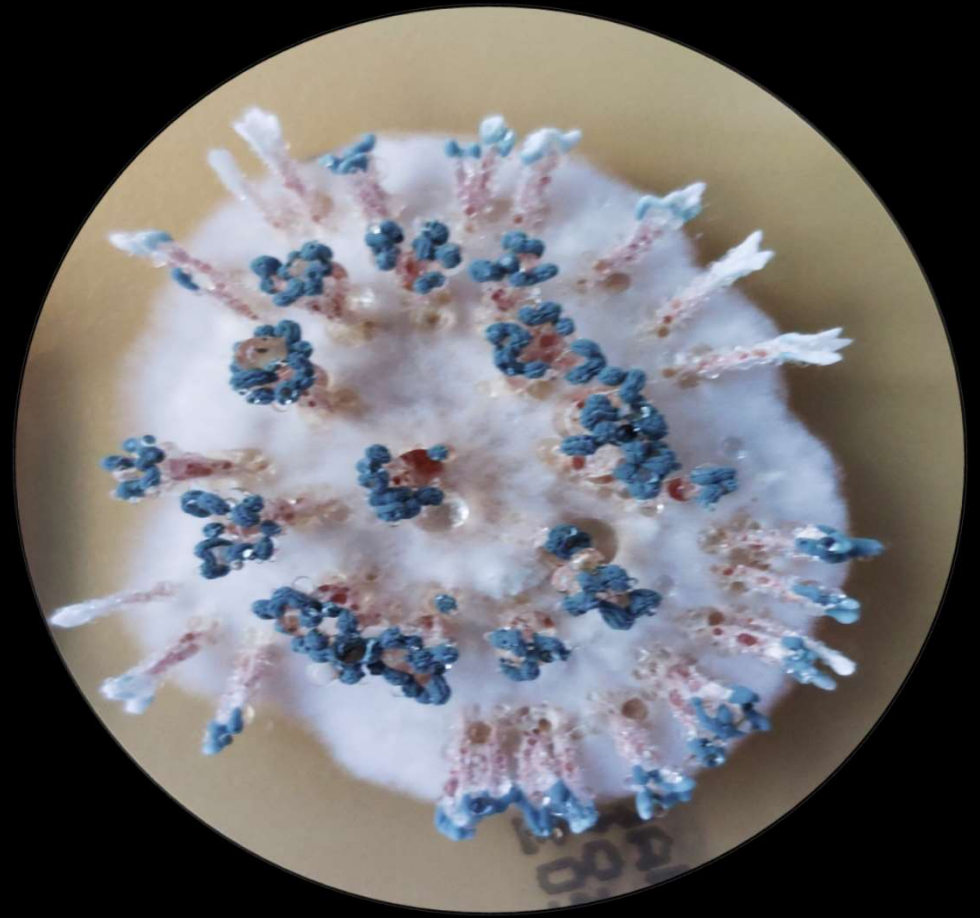
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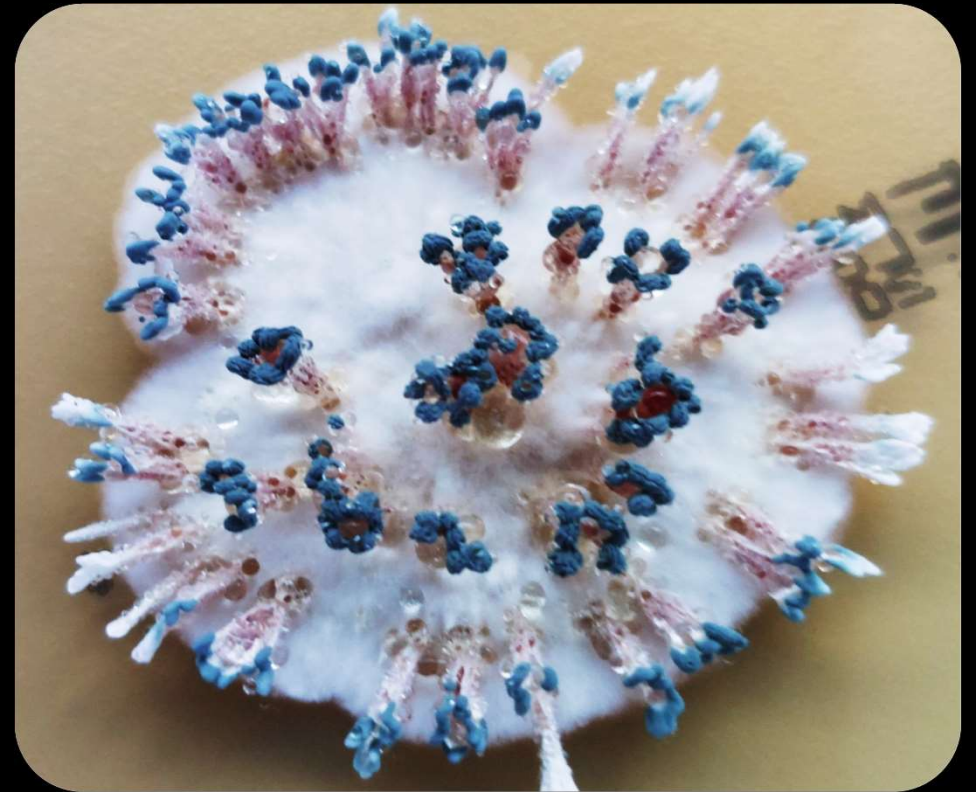
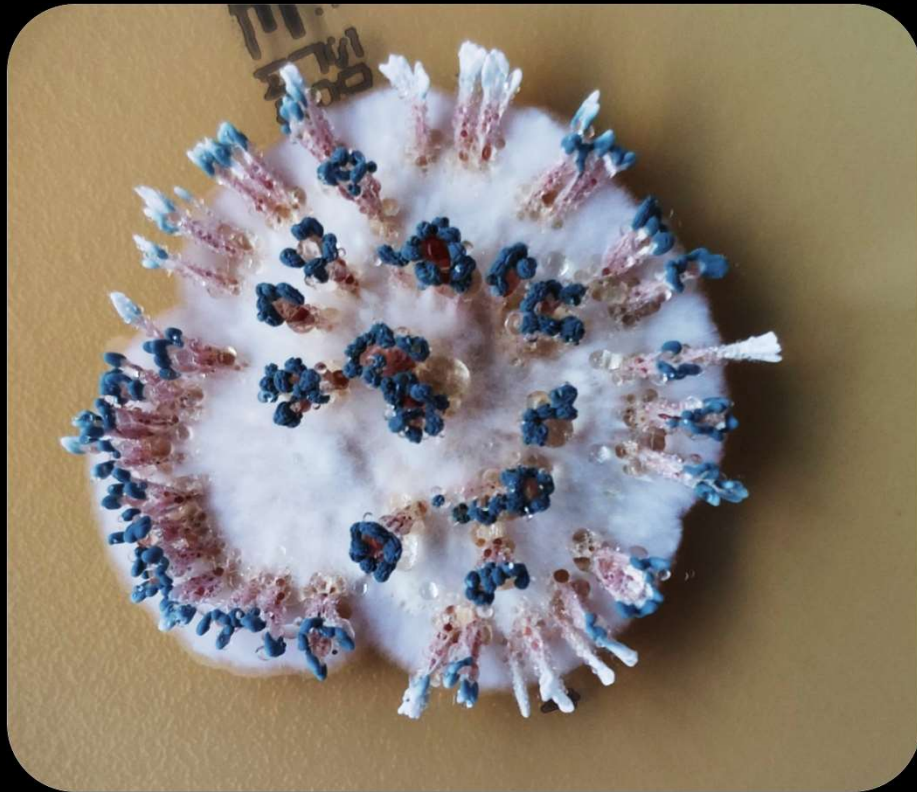
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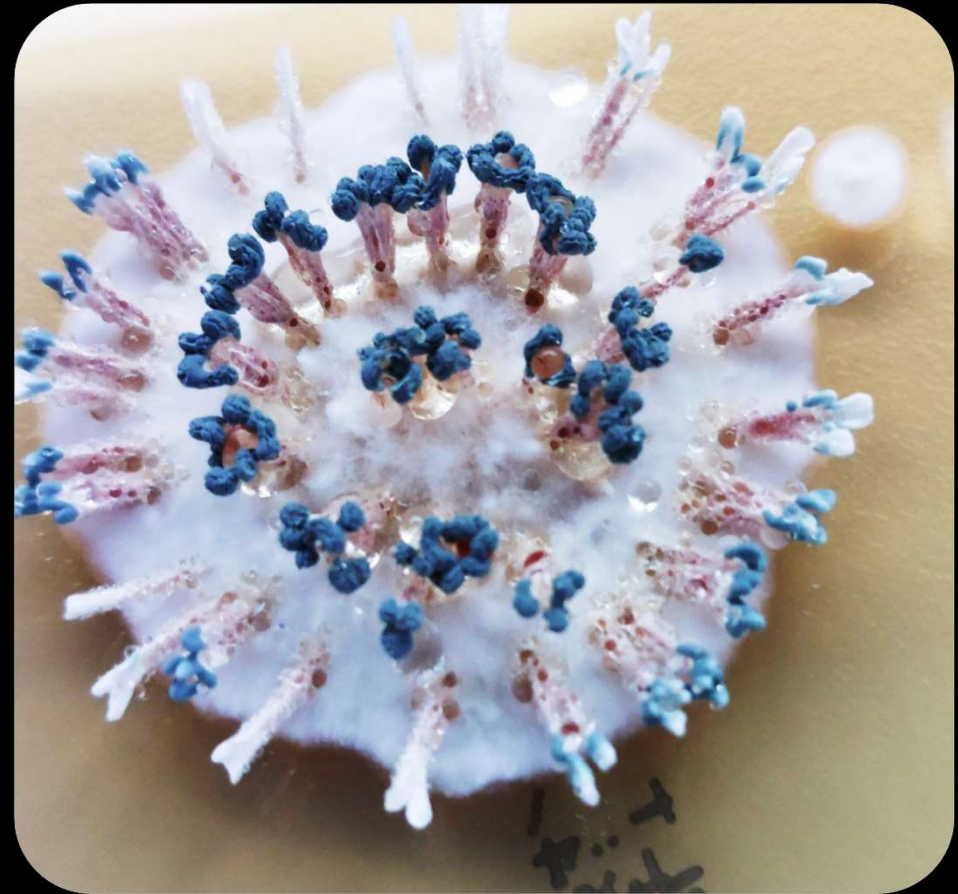
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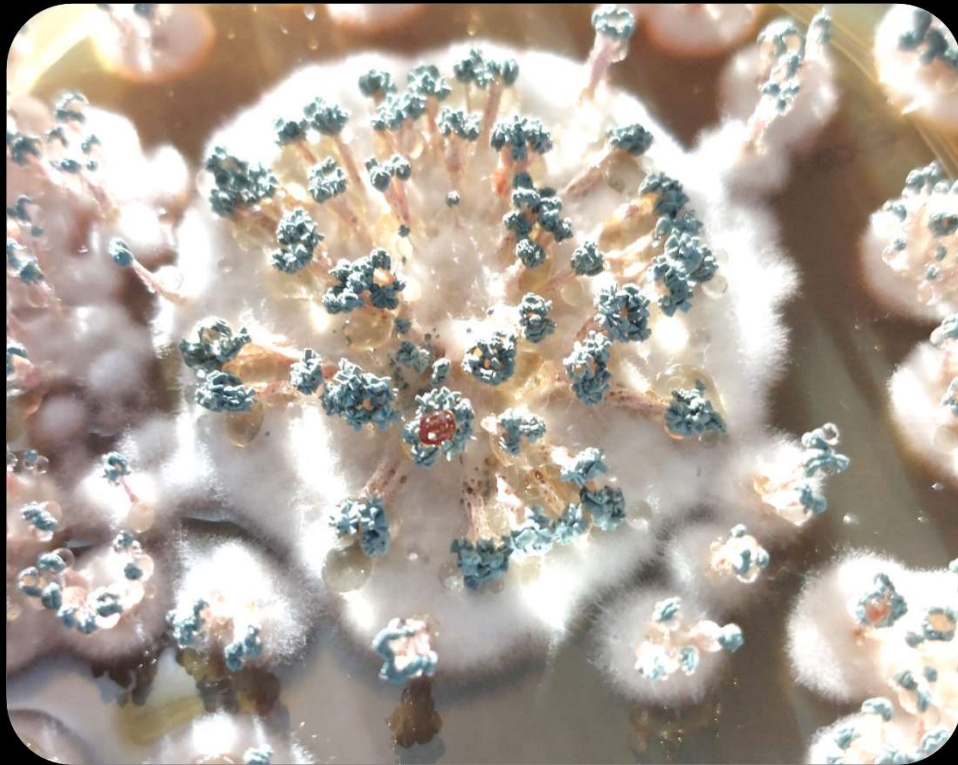
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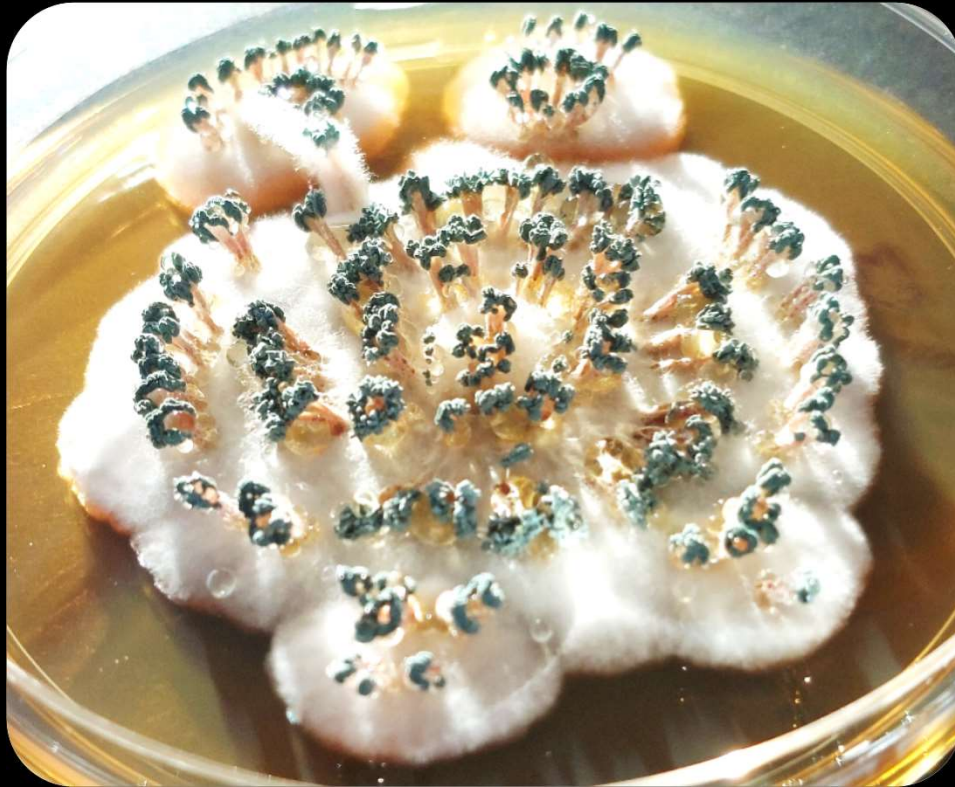
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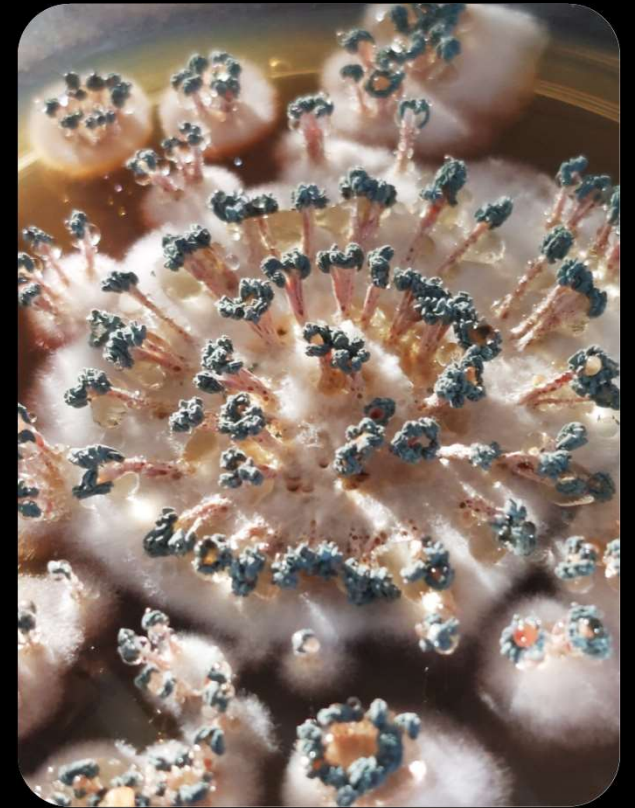
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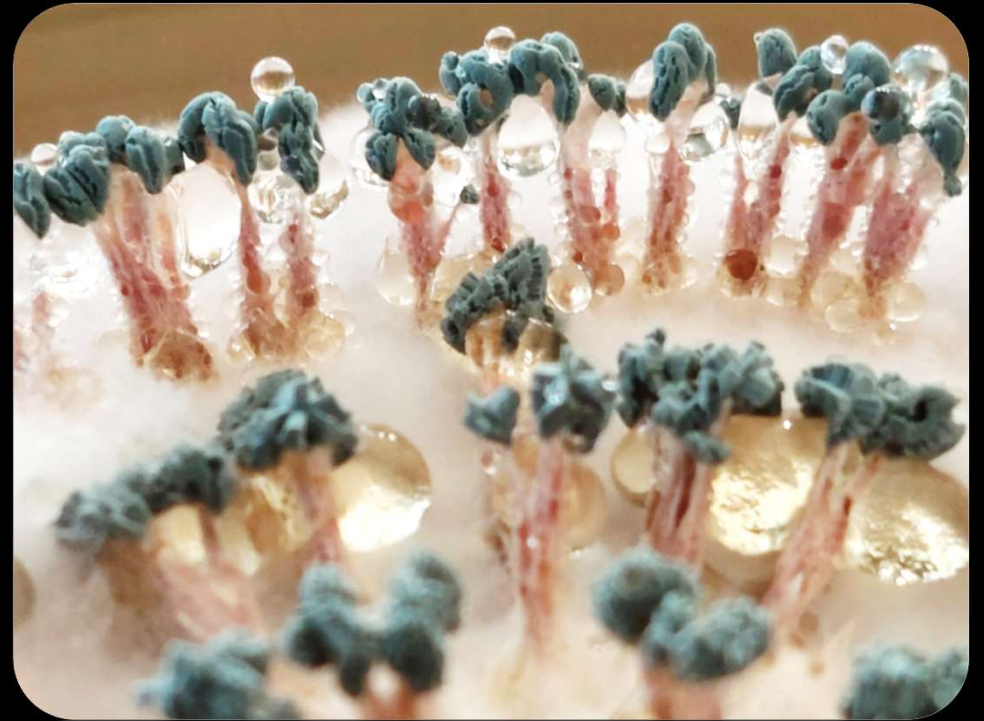
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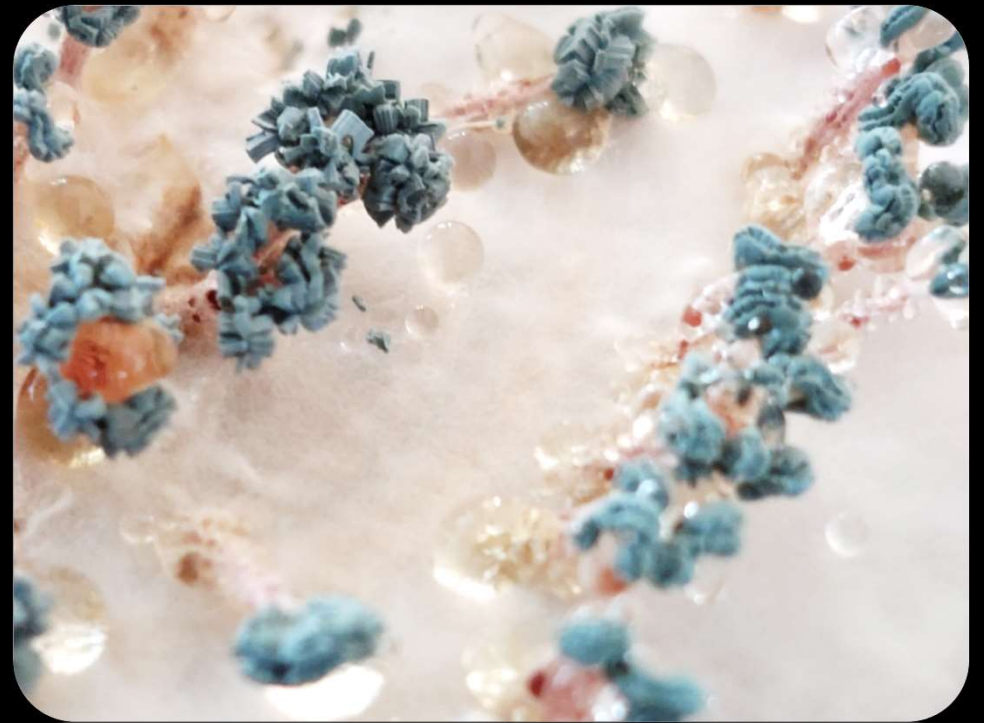
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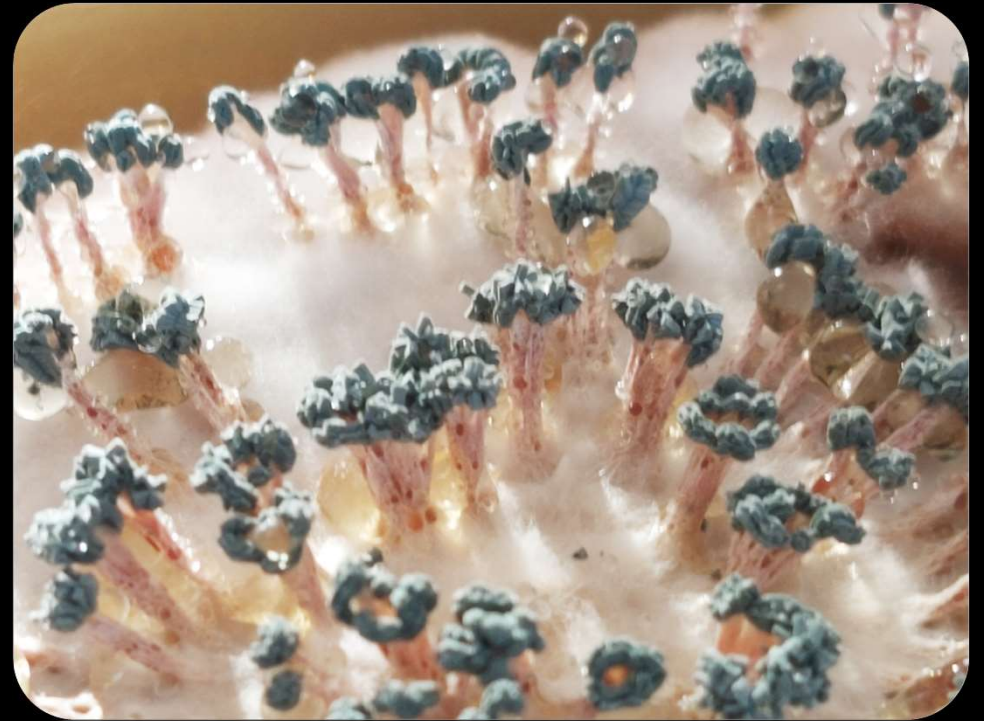
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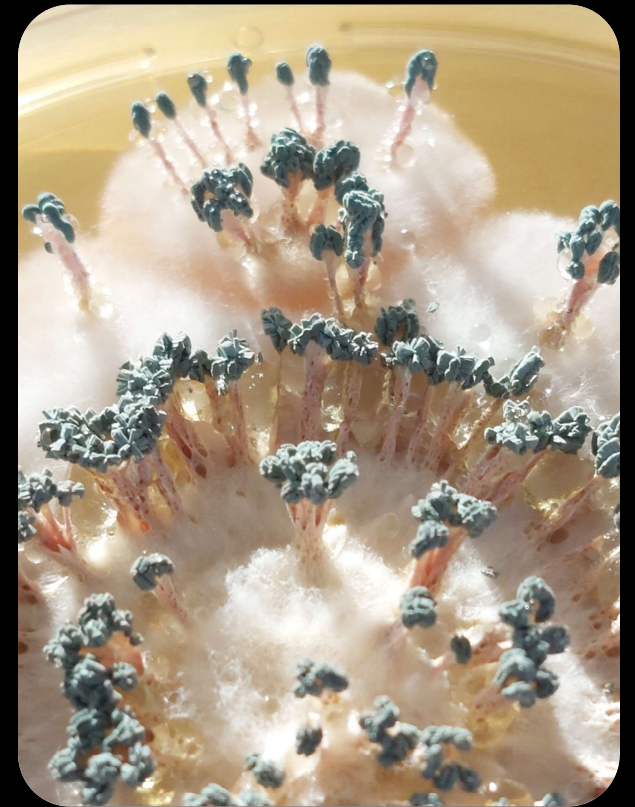
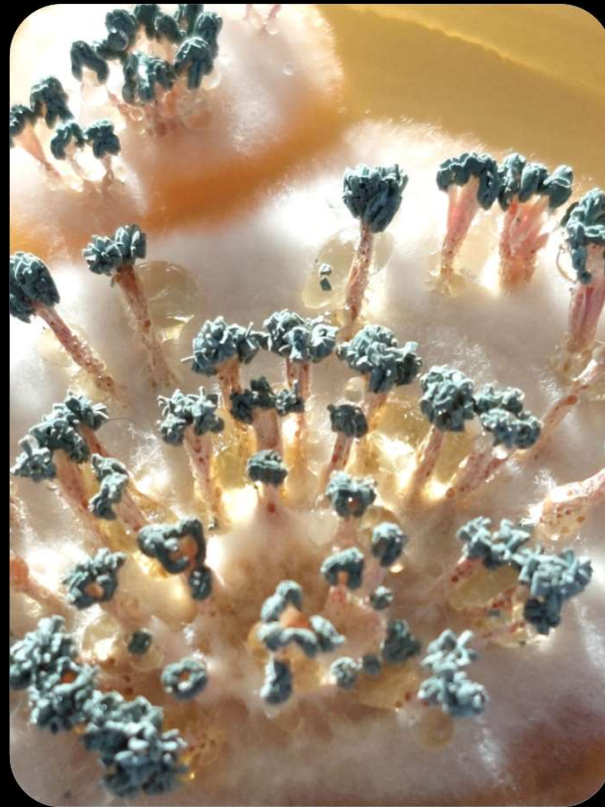
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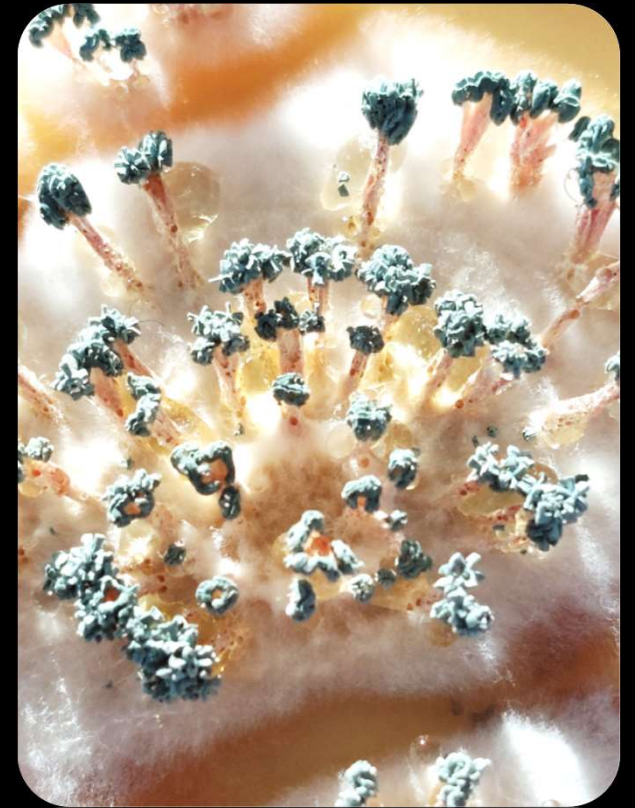
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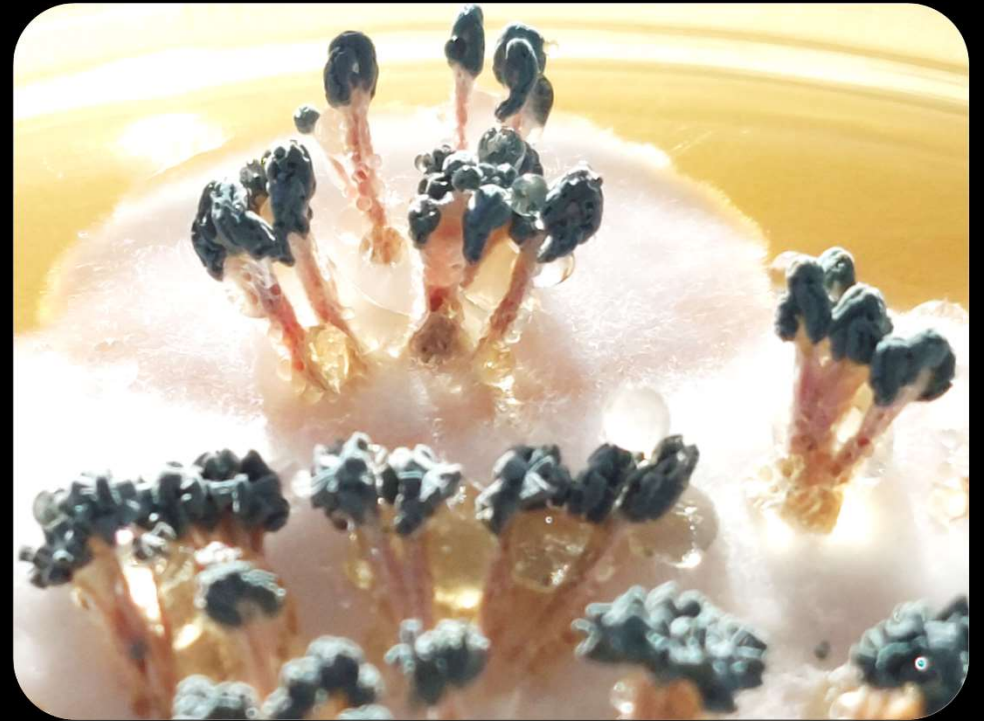
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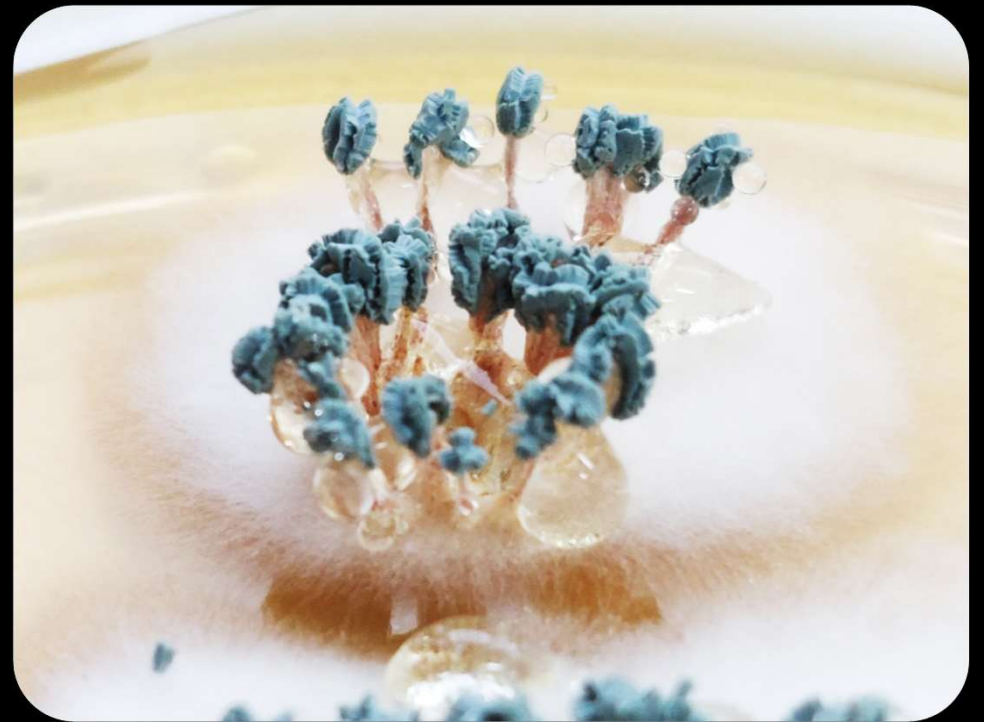
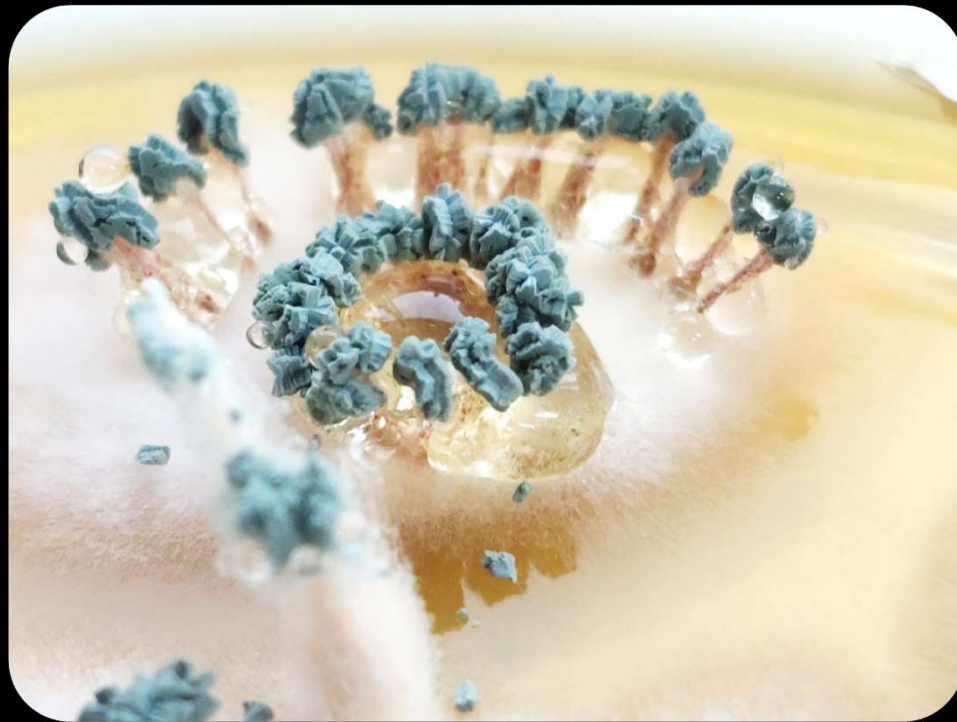
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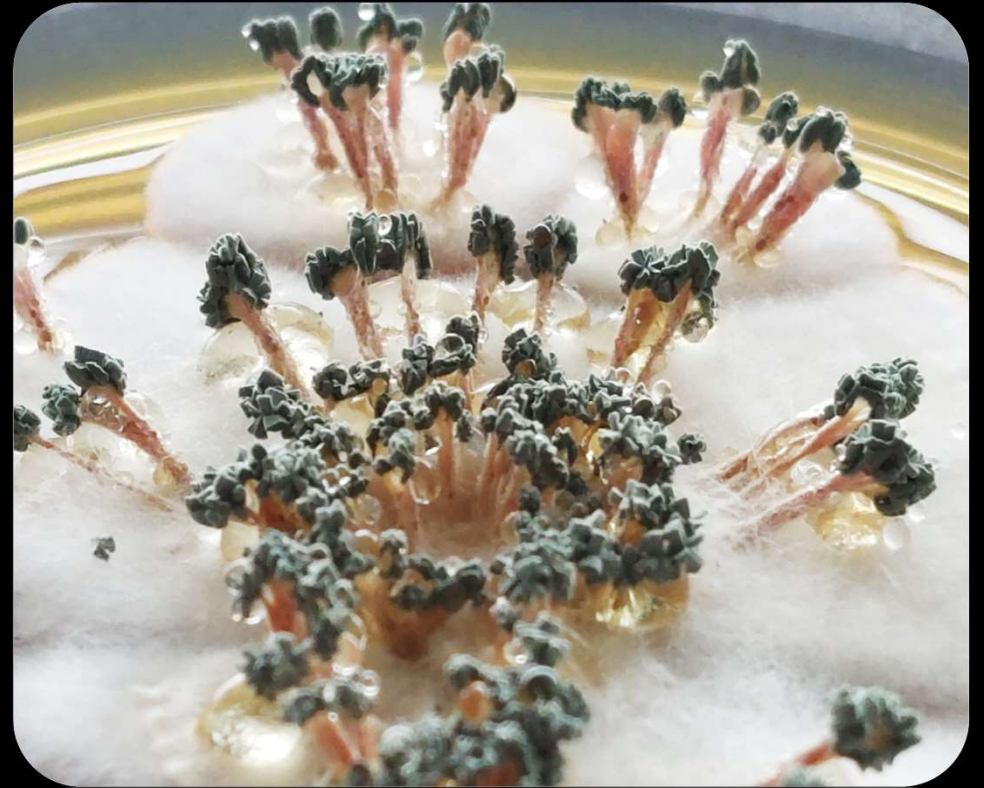
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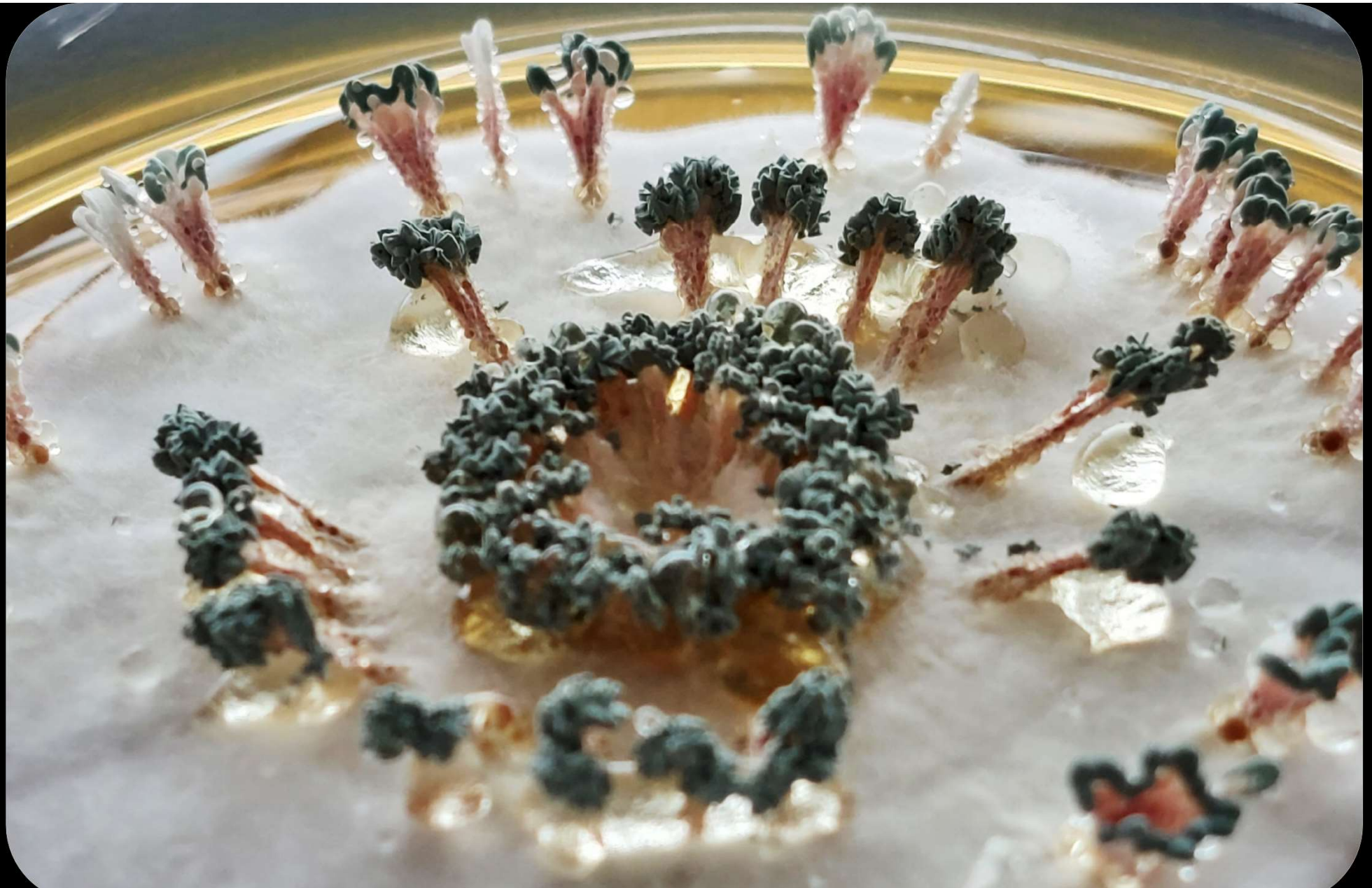


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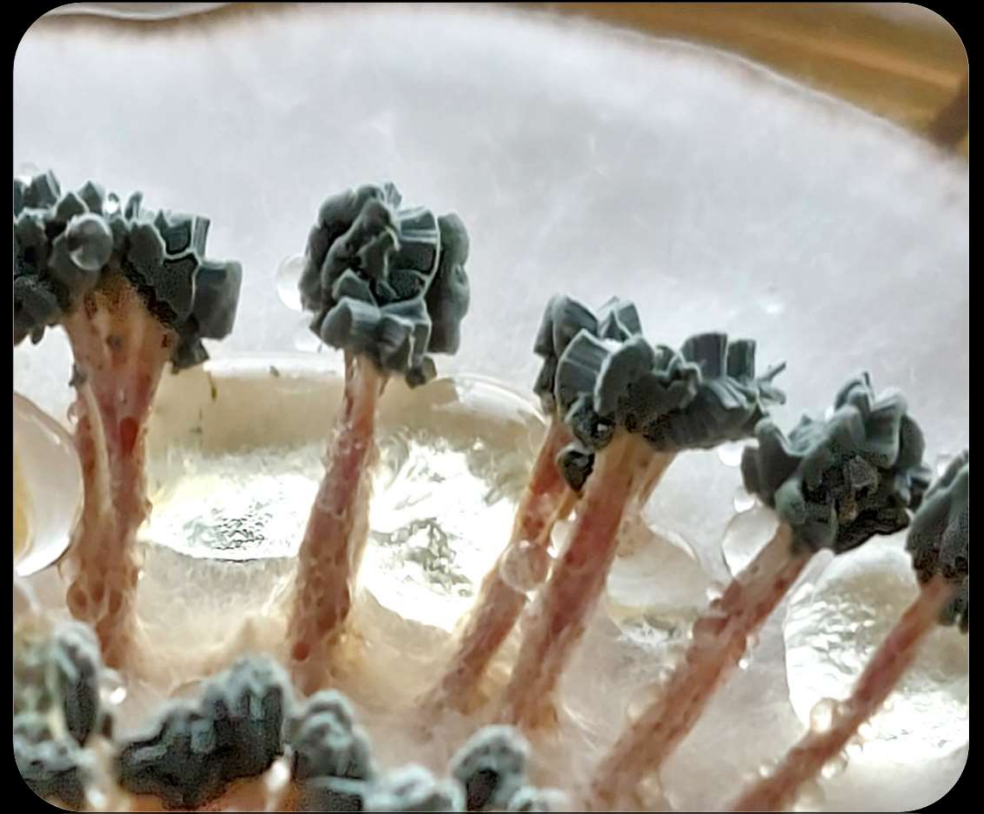




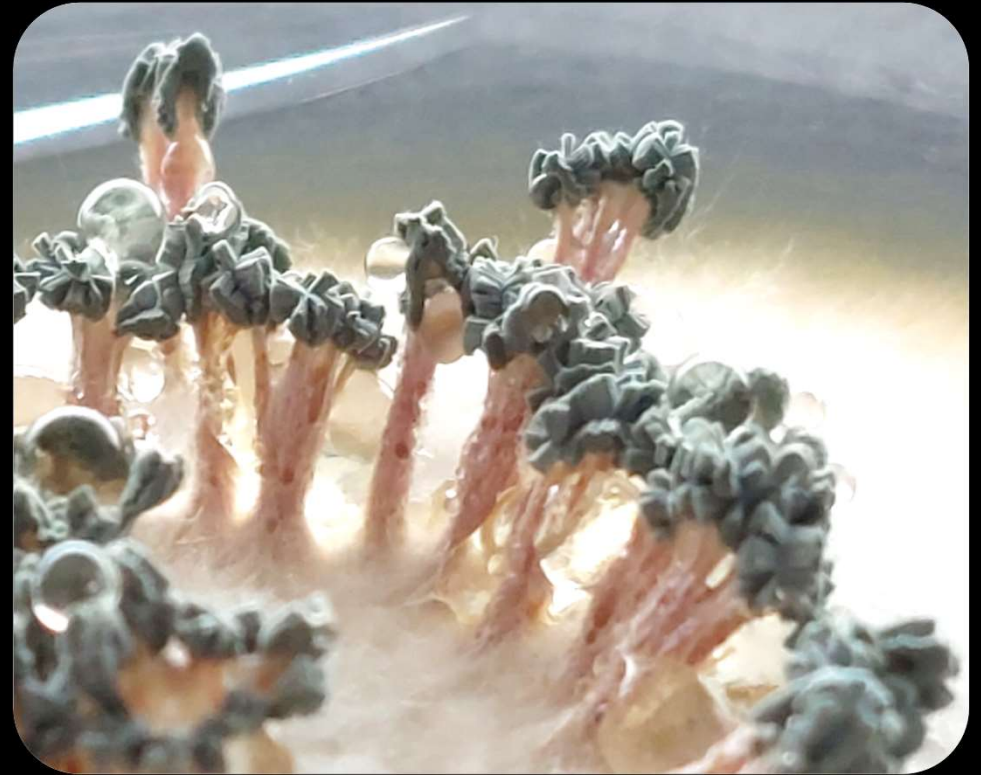
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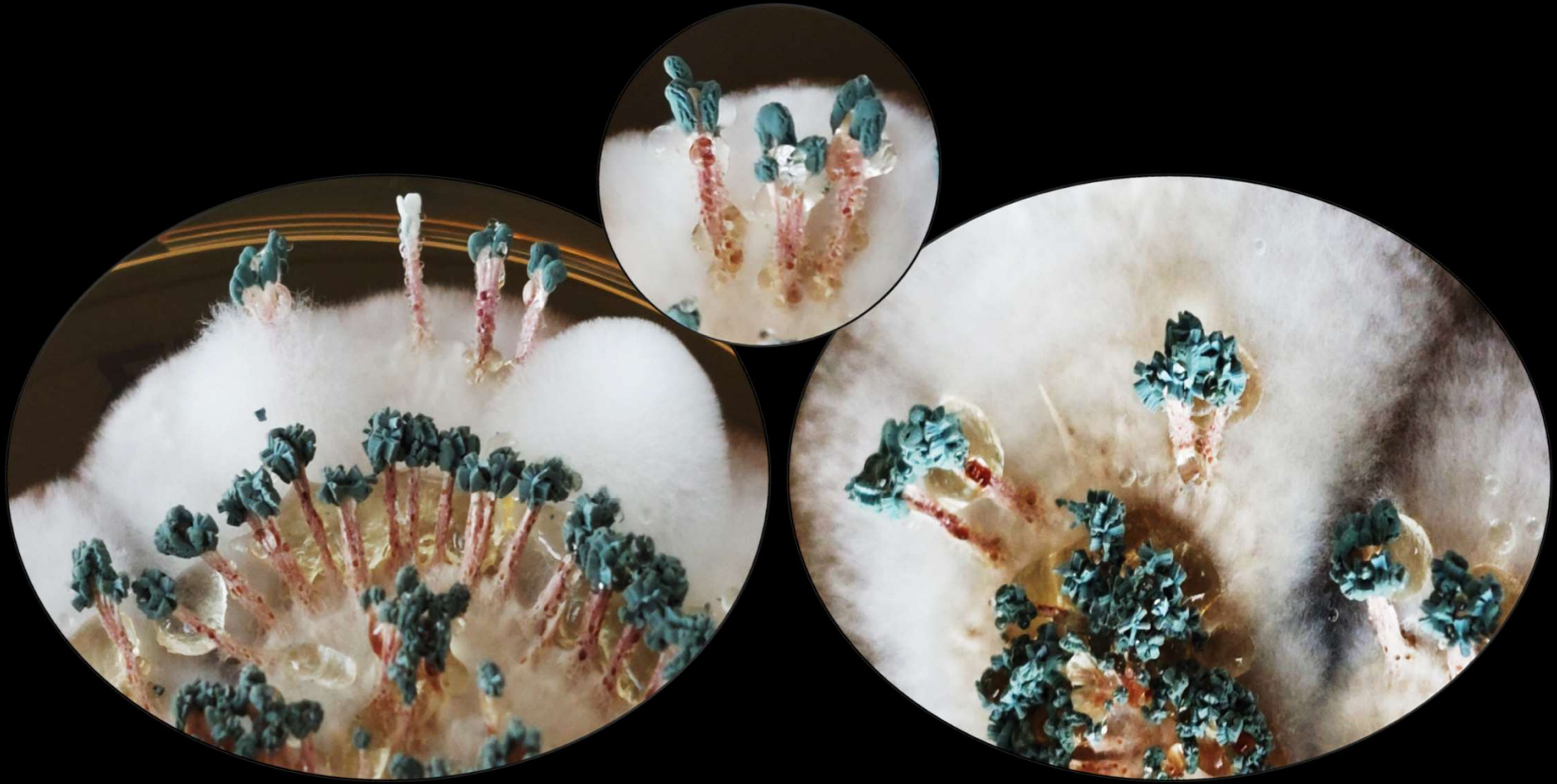
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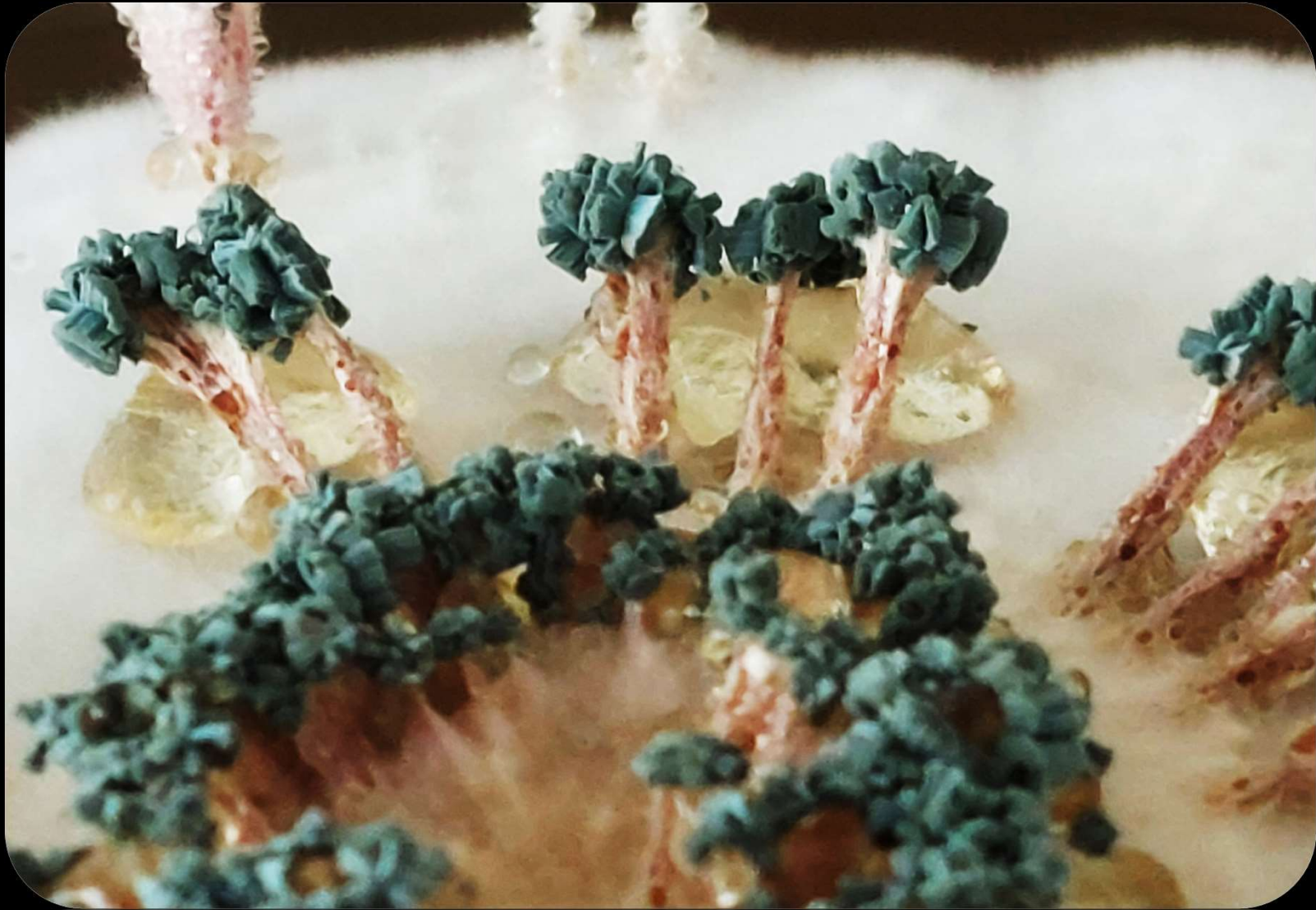












Penicillium vulpinum: synnemata

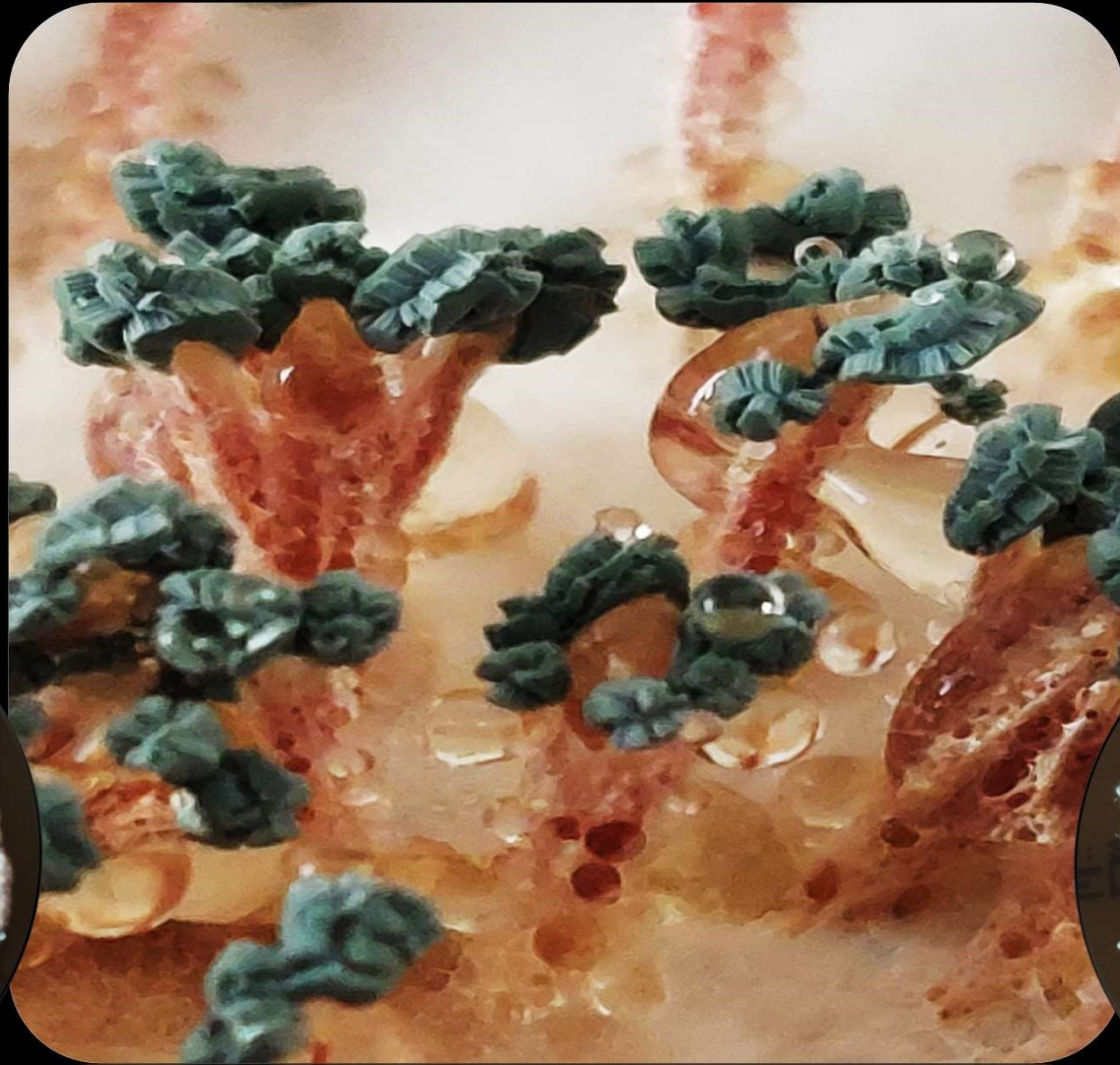


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Penicillium vulpinum auf DG-18 & MEA



Medium: DG-18

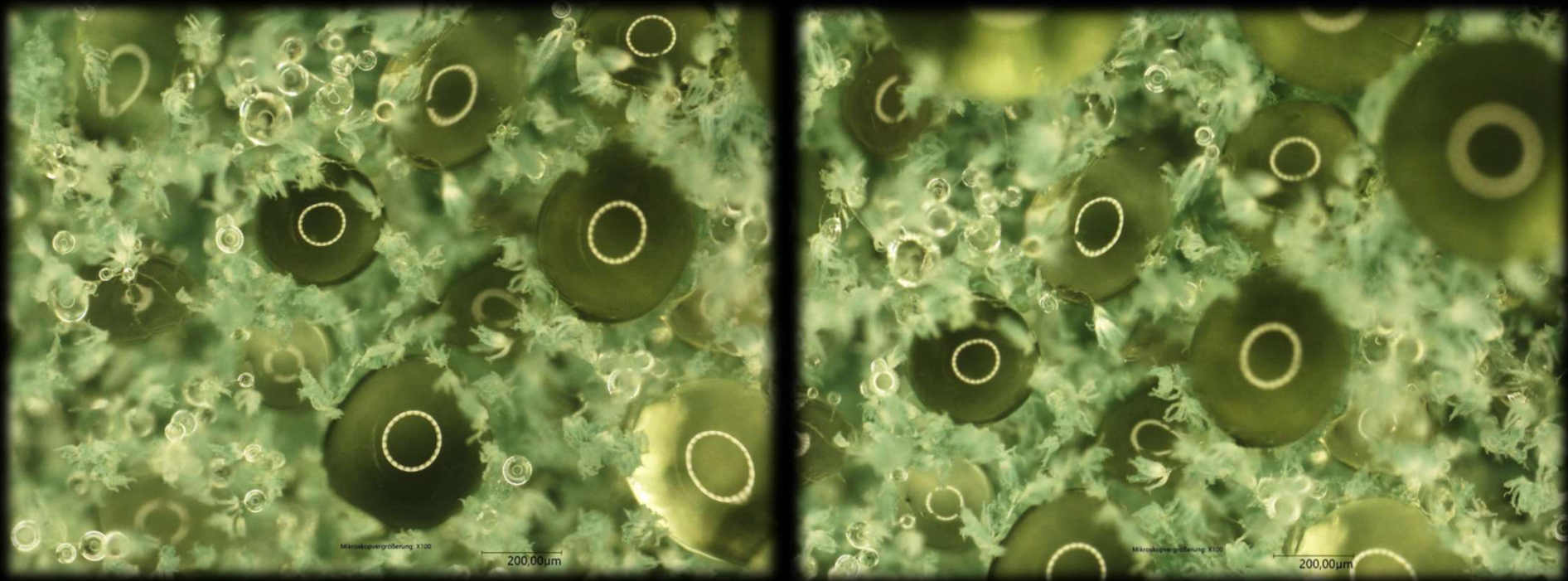


Medium: MEA

Penicillium vulpinum: Mykotoxine

Extrolites (Exudat):	Patulin, Roquefortin C/D, Meleagrinen, Cyclopiamin, Lichexanthone, Pachybasin, Asterric acid, Cyclopeptin, Cyclopenin, Cyclophenol, Dehydrocyclopeptin, Viriudacin, Viridicatol, Oxaline
Mesophil:	t opt. = 25°C, a_w = 0,85

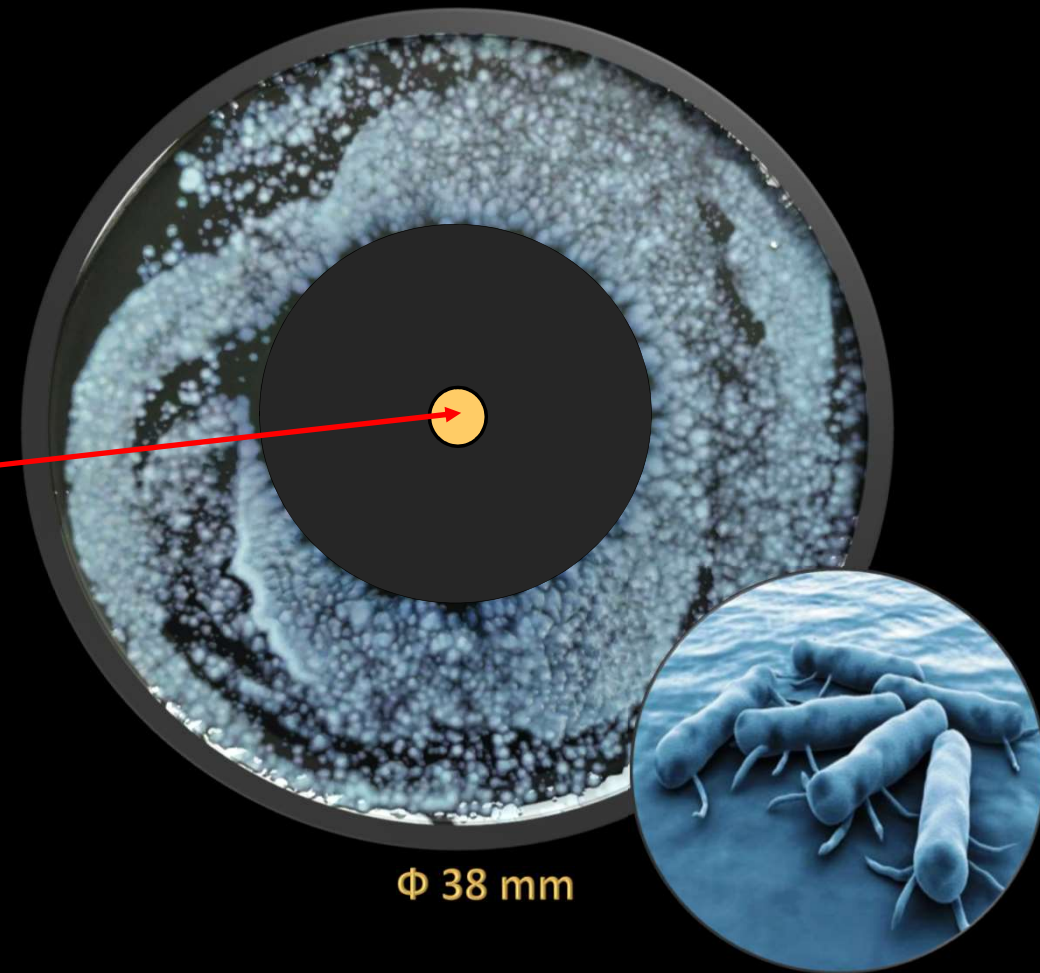
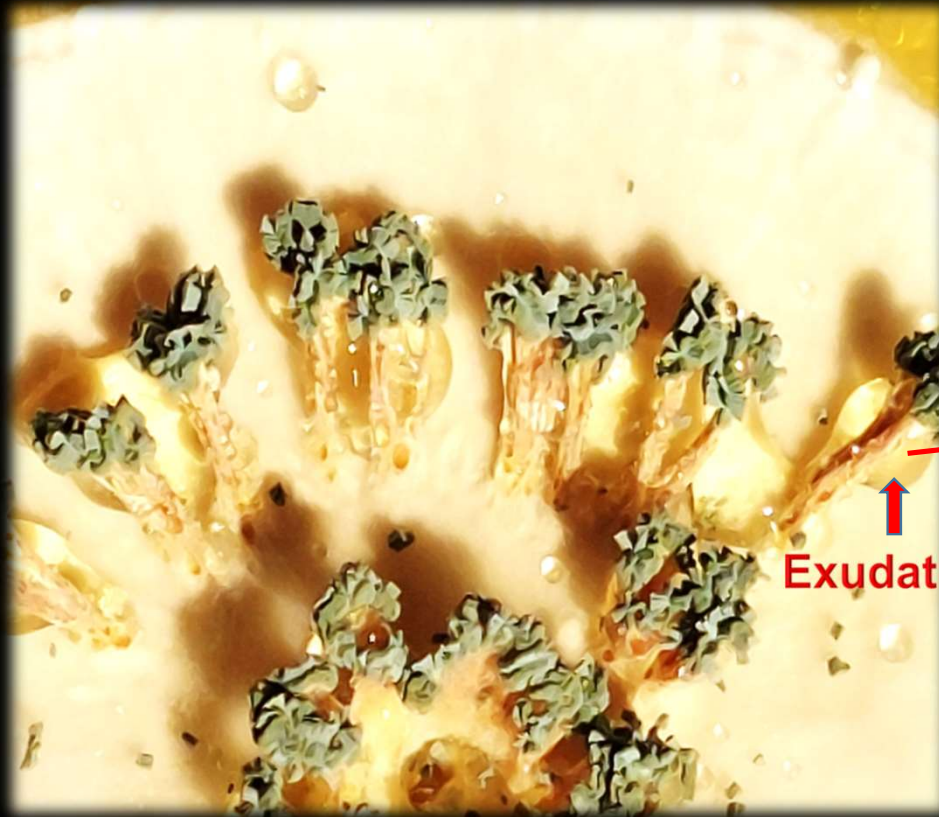
Penicillium vulpinum: Exudat



Keyence Mikroskop VHX 700, 100x

Penicillium vulpinum: synnemata

Inhibitorisch Effekt des Exudats auf Legionella pneumophila



Escherichia coli

Gram negativ

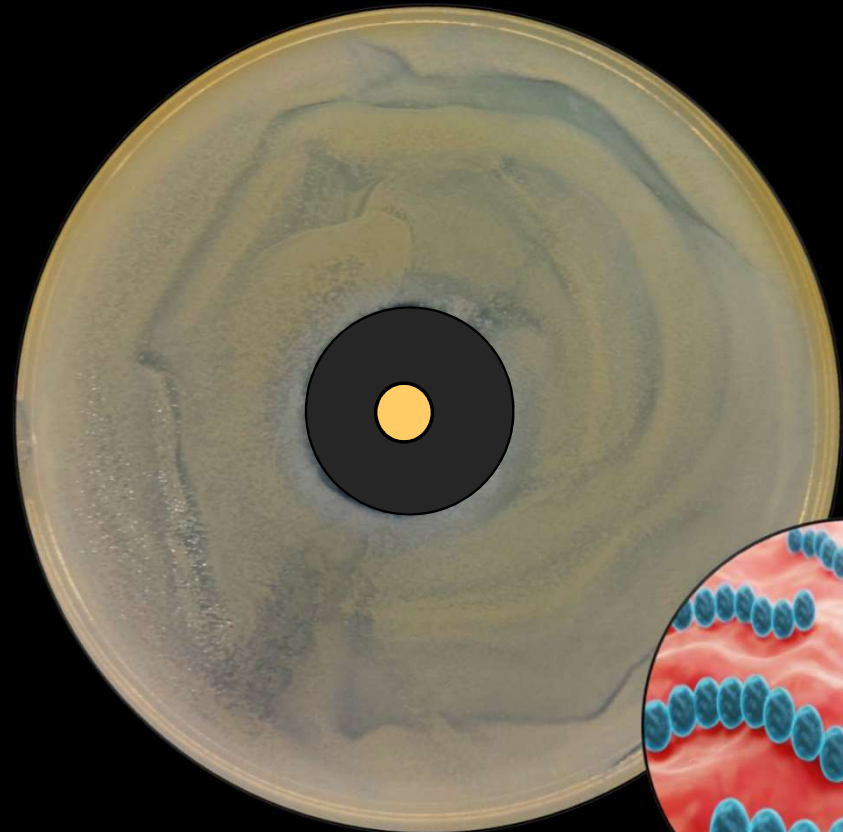


Φ 19 mm

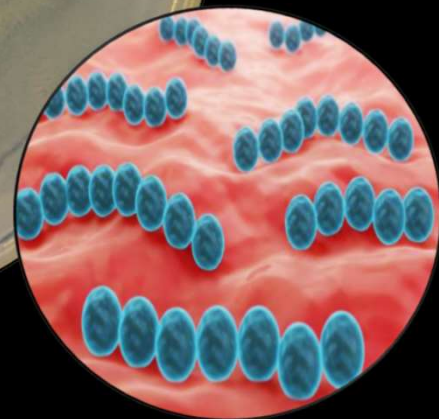


Staphylococcus aureus

Gram positiv



Φ 19 mm



Klebsiella aerogenes

Gram negativ



Φ 19 mm

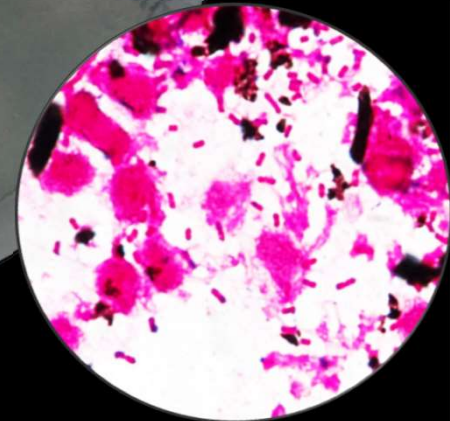


Klebsiella oxytoca

Gram negativ

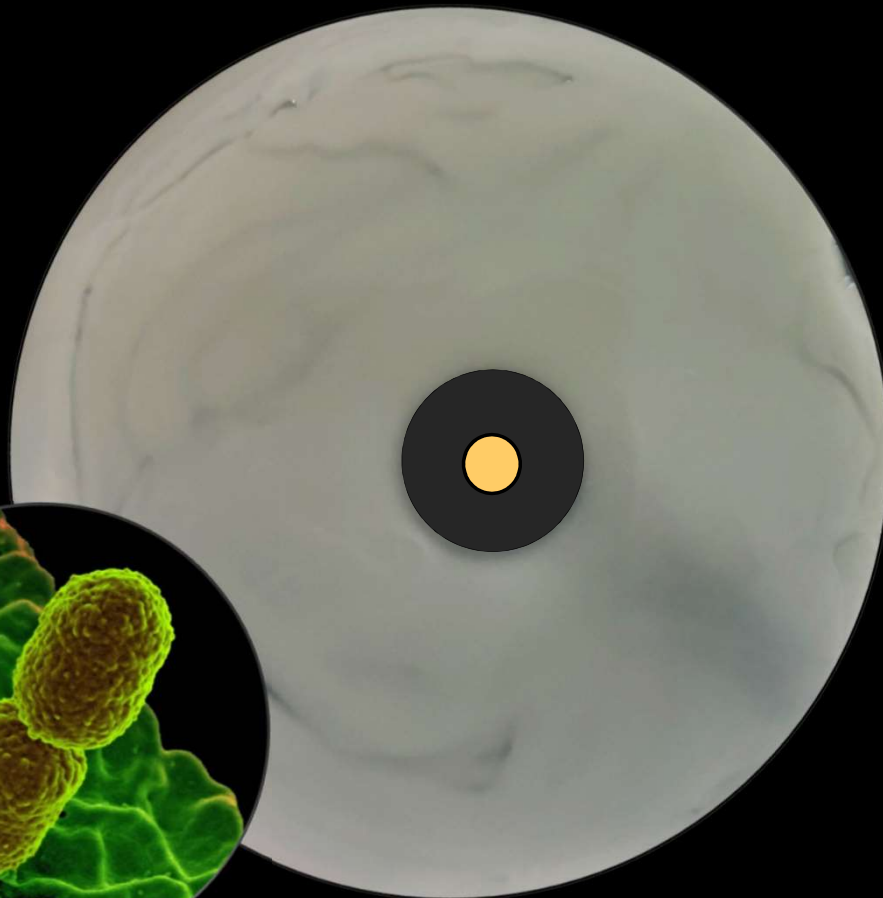


Φ 14 mm



Klebsiella varriicola

Gram negativ



Φ 16 mm

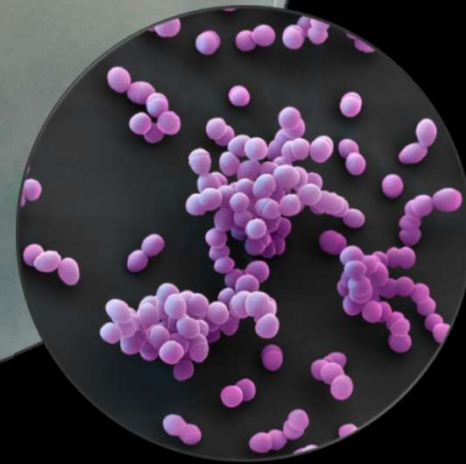


Enterococcus faecalis

Gram positiv

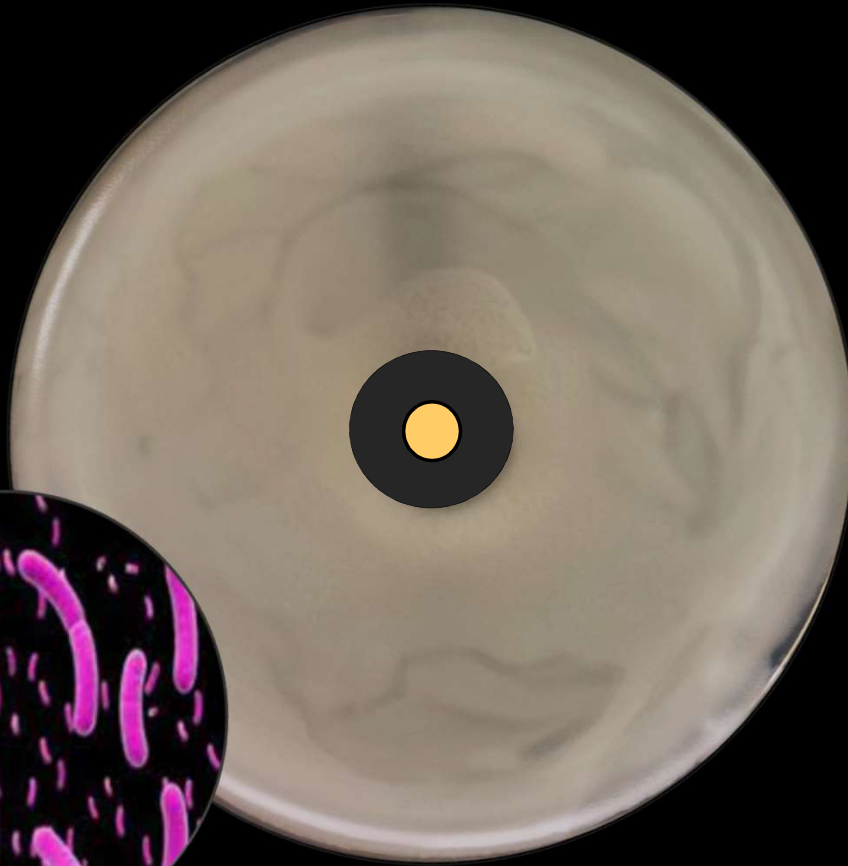


Φ 12 mm

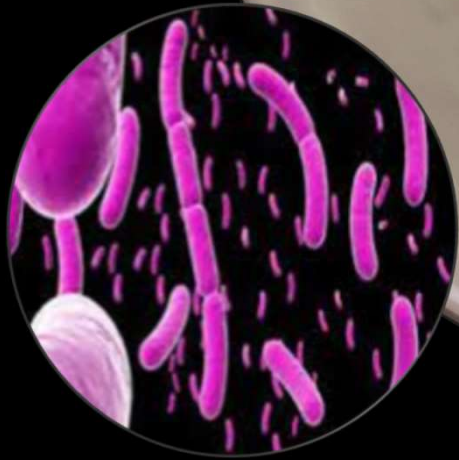


Bacillus cereus

Gram positiv

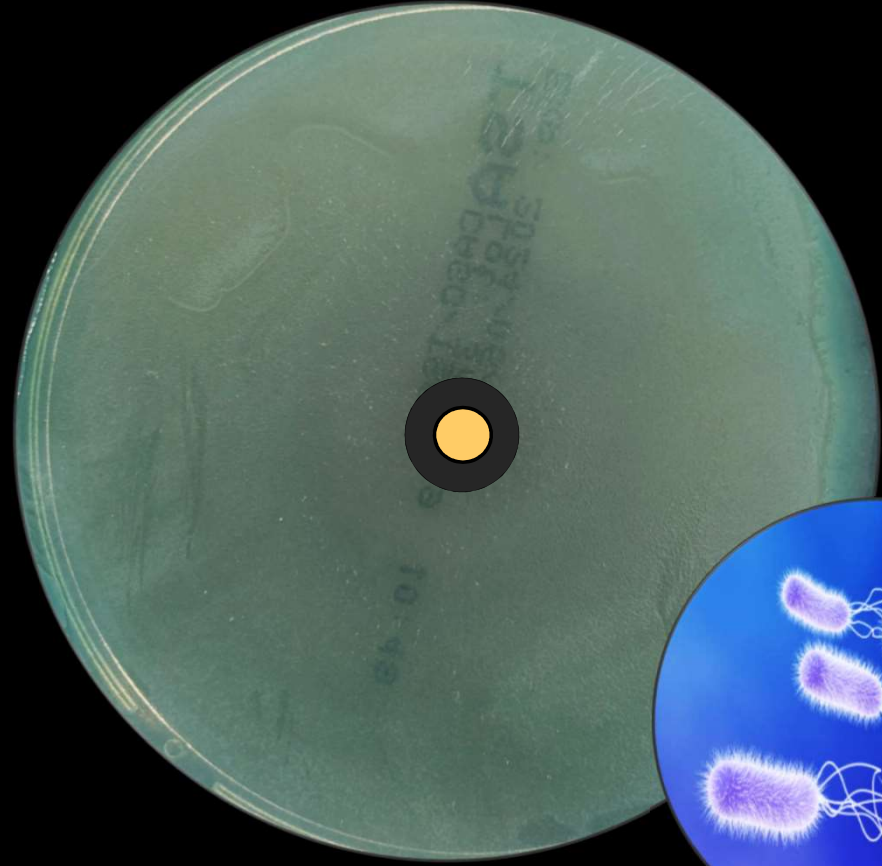


Φ 14 mm

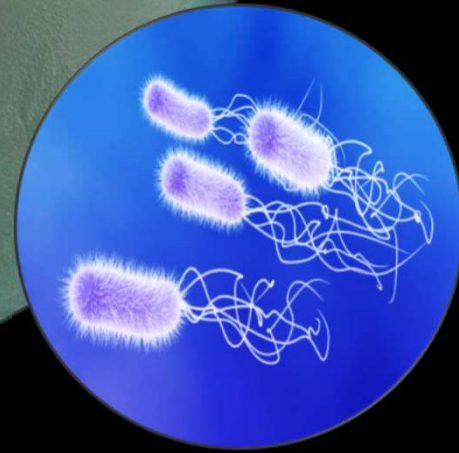


Pseudomonas aeruginosa

Gram negativ

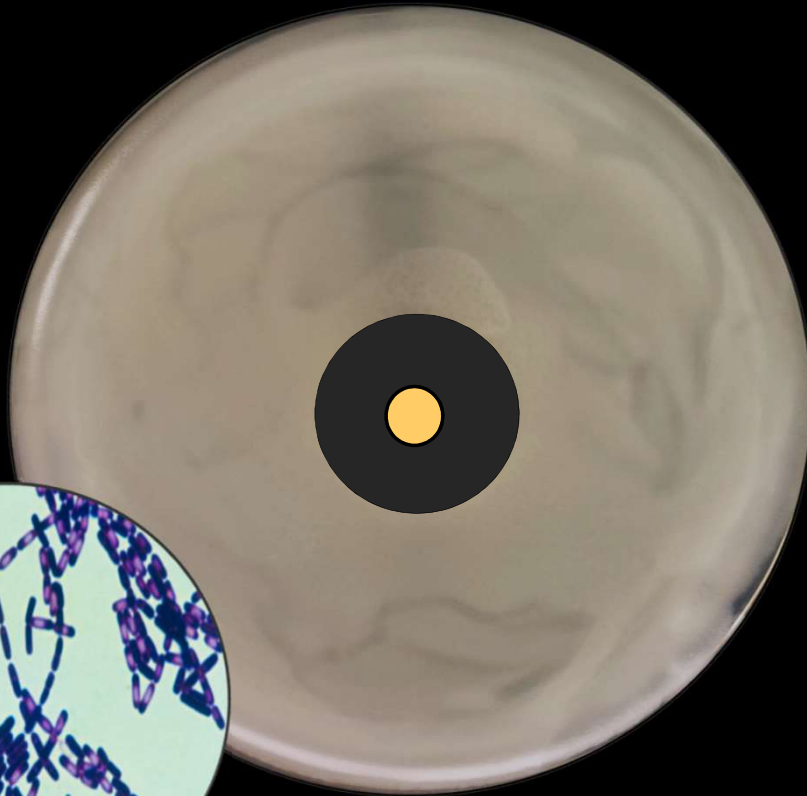


Φ 9 mm

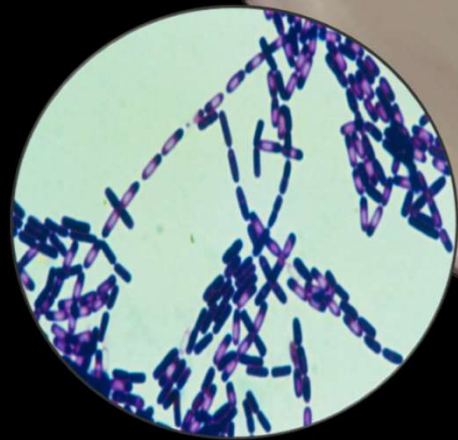


Bacillus subtilis

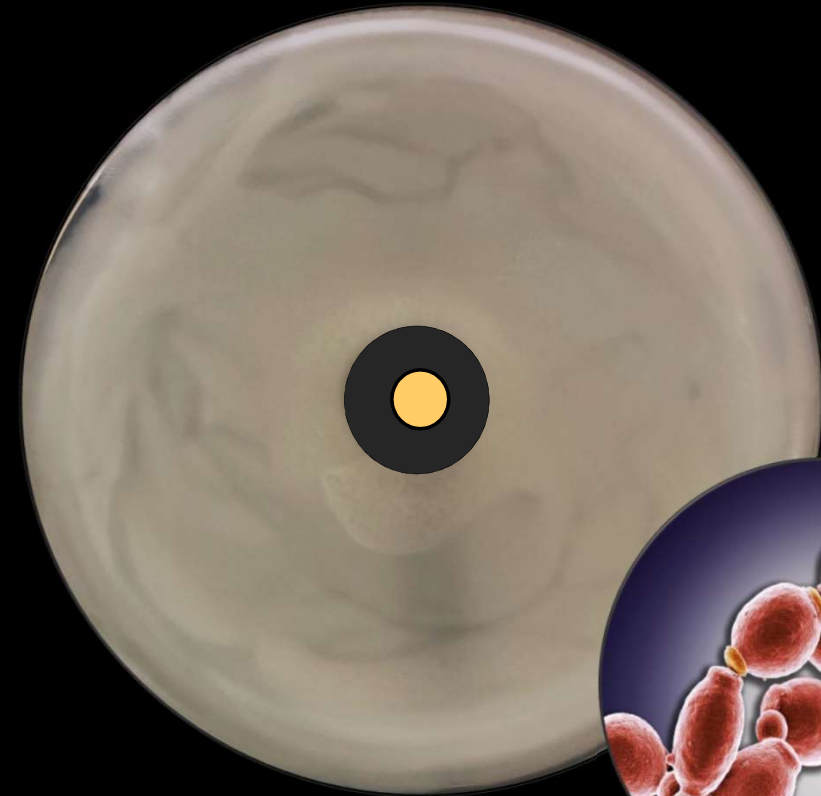
Gram positiv



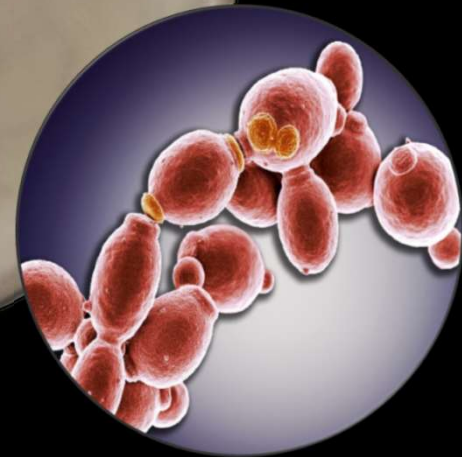
Φ 22 mm



Candida albicans

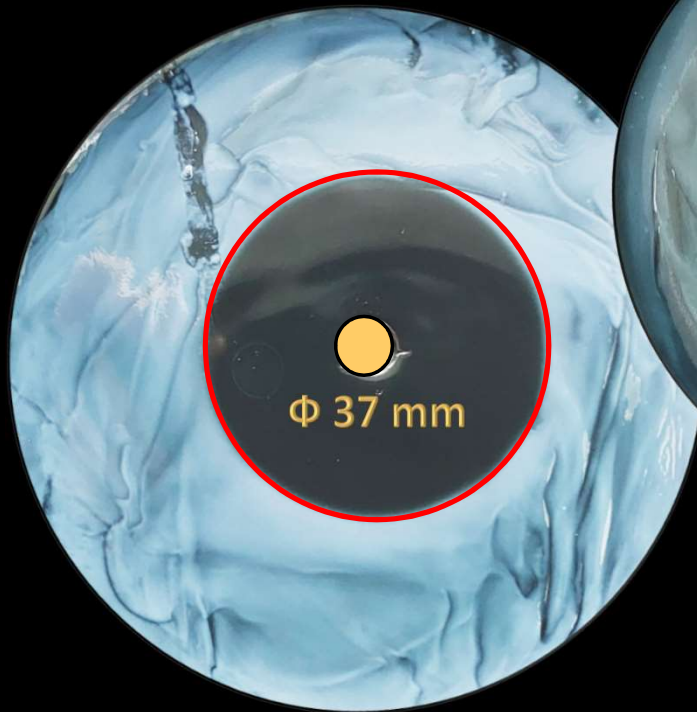


Φ 14 mm



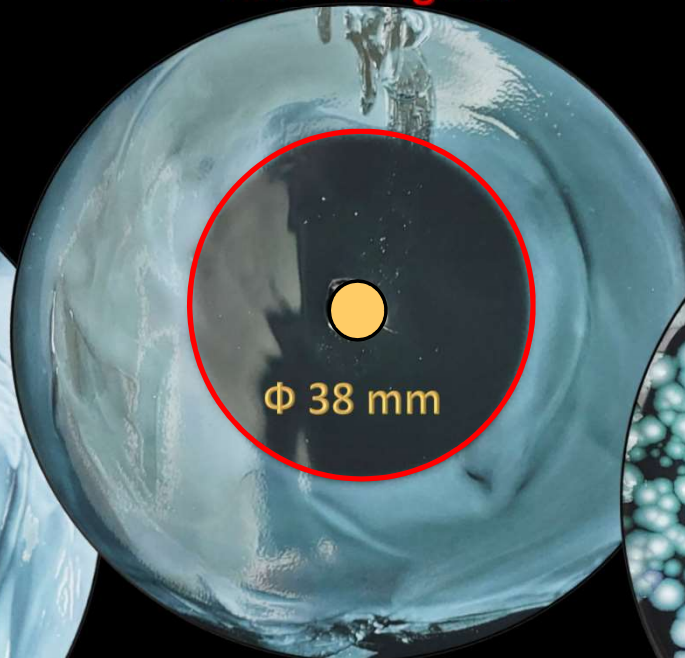
Penicillium vulpinum: exudat

Gram negativ



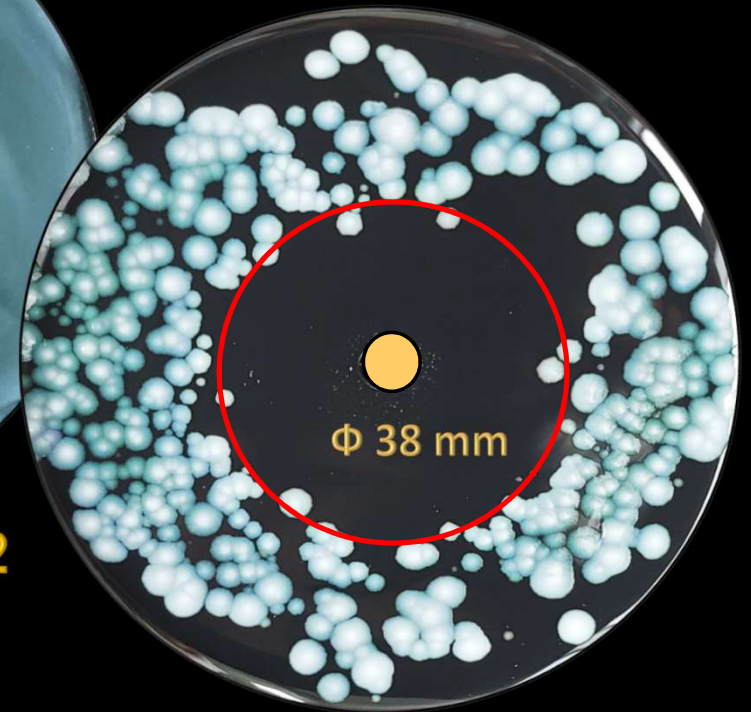
Legionella anisa 1

Gram negativ

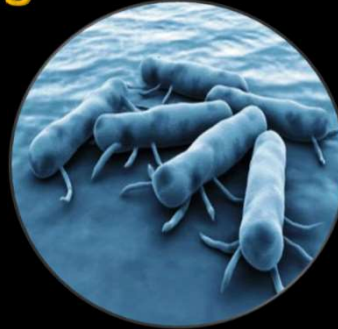


Legionella anisa 2

Gram negativ

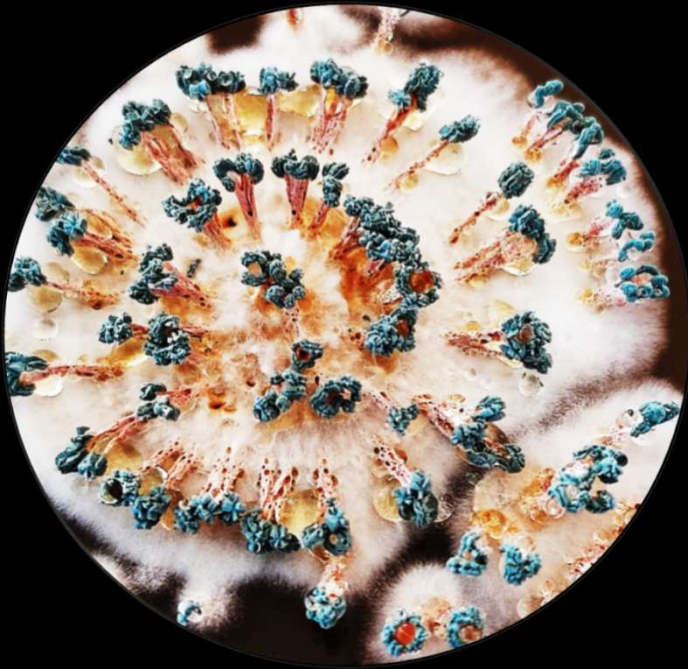


Legionella pneumophila SG 1
„life“

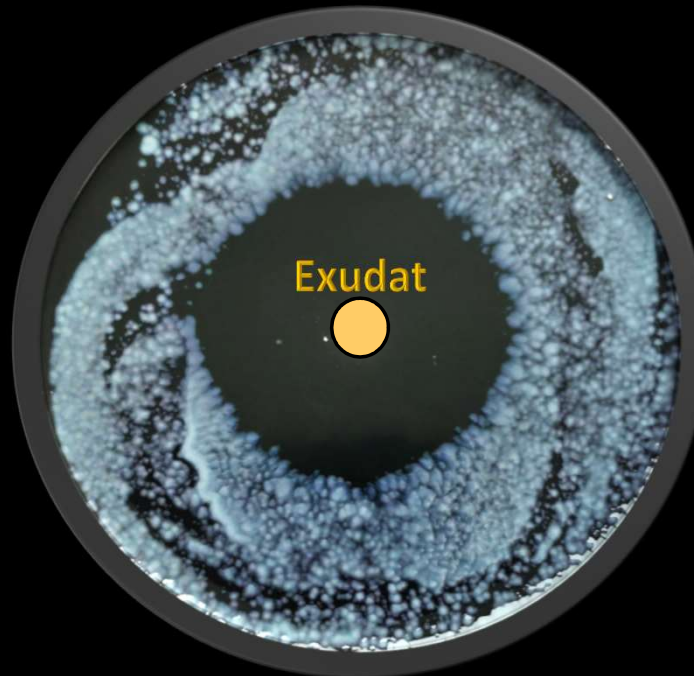


Vielen Dank für Ihre Aufmerksamkeit

Penicillium vulpinum AS-1



Legionella pneumophila



Penicillium vulpinum AS-2

